TEXTILE TECHNOLOGY DIGEST

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ABSTRACTS

FIBERS A

NATURAL FIBERS A 1

EQUATIONS FOR PREDICTING SINGLE-STRAND YARN STRENGTH AND ELONGATION BASED ON MEASURES OF RAW-COTTON QUALITY. R. W. Webb. U. S. Agricultural Marketing Service, Washington, D. C. Sept. 1957. 40 p. Marketing research report no. 197. Available from Superintendent of Documents, Government Printing Office, Washington, D. C. 25 cents. (3089)

This is the first report in a series of relationship studies on cotton fiber properties which deals with single-strand yarn strength. All previous studies of this series dealing with yarn-strength have involved the measure of skein strength. Thirteen equations are given, based on various measures of raw-cotton quality, for predicting single-strand strength and elongation of any size of carded yarn within a relatively wide range. Tables. Equations. 34 references.

EFFECTS OF MOISTURE ADDED AT LINT SLIDE ON LINT QUALITY AND BALE WEIGHT IN HUMID COTTON-GROWING AREAS. A. C. Griffin and E. A. Harrell. U.S. Agricultural Research Service, Washington, D.C. Aug. 1957. 16 p. Production research report no. 14. Available from Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C. 10¢. (3090)

The tests reported in this publication indicated no quality improvement in cotton to which moisture was added at the lint slide, when compared with cotton similarly dried and ginned but with no moisture added at the lint slide. Of the 24 bales involved, no damage could be attributed to addition of moisture at the lint slide, except for two bales packaged at 15% or more moisture. These tests revealed no differences in lint quality or spinning properties of the bales for which a wetting agent was used as the test variable. There was some evidence, however, to indicate that such bales may change their weight faster because of processes of sorption than bales to which no wetting agent is applied.

CHANGES IN DENSITY OF COTTON FIBERS DURING PROGRESSIVE STAGES OF MATURITY. C. V. Wray (Clemson Agricultural Coll.). Bobbin and Beaker 16: 20-24 (Fall 1957). (3091)

This report derives from a study made to find a rapid and economical method for determining fiber density. Seven varieties of cotton were tested for density at four stages of maturity.

NEW MATERIALS FROM THE COTTON PLANT. PART 1. COTTON STEM FIBERS. A. E. Haarer. Fibres 18: 325-327 (Oct. 1957). (3092)

The difficulties in processing cotton stalk fibers are surveyed, and some recent attempts to overcome them are described.

RELATIONSHIP OF LINT QUALITY AND MOISTURE THROUGH HARVESTING AND GINNING. R. A. Montgomery and O. B. Wooten. Cotton Gin & Oil Mill Press 58: 7, 50 (Oct. 19, 1957). (3093)

Picking cotton dry is highly important to cotton producers and ginners. When early-morning-picked cotton and afternoon-picked cotton were stored in trailers for a period of time before ginning and were given equal drying in the gin, morning-picked bales were almost a full grade lower. A major part of the grade difference appeared to be associated with loss of color while the cotton was stored in trailers. The delay in ginning (12 to 72 hours) in this test is comparable to normal delays at commercial gins. Tables.

FIBER YIELDING WEEKS OF BOMBAY AND ITS SUBURBS. PART 2. ABUTILON INDICUM, SWEET. S. M. Betrabet and B. S. Navalkar. Indian Textile J. 67: 684-686 (Aug. 1957). (3094)

The chemical and physical properties of Abutilon indicum, Sweet, were investigated in an attempt to find a jute substitute. Tables. 8 references.

EFFECT OF CONCENTRATED SULFURIC ACID ON THE VARIOUS CONSTITUENT AMINO ACIDS OF WOOL. R. L. Elliott, R. S. Asquith and D. H. Rawson. (Letter to the editor). J. Soc. Dyers Colourists 73: 424-425 (Sept. 1957). (3095)

OXIDATION OF SILK FIBROIN BY HYDROGEN PEROXIDE AND BY PERACETIC ACID. D. A. Sitch and S. G. Smith (Shirley Inst.). J. Textile Inst. 48: T341-T355 (Sept. 1957). (3096)

Peracetic acid causes more rapid scission of the chain molecules of fibroin than does hydrogen peroxide, but the loss of weight for a given increase in fluidity is greater with hydrogen peroxide than with peracetic acid. Peracetic acid is more effective in modifying the side-chains of the tyrosine residues and produces more acidic groups than does hydrogen peroxide. For fibroin oxidized by peracetic acid, the increase in Methylene Blue absorption bears a linear relation to the fall in tyrosine content. Tables. Graphs. 23 references.

TRENDS IN THE STAPLE CRIMP-FINENESS RELATIONSHIP OF AUSTRALIAN WOOL. W. R. Lang. J. Textile Inst. 48: T335-T340 (Sept. 1957). (3097)

Significant differences in the mean staple crimps per inch of Australian wool grown in 1860-1870, 1917-1918, 1942-1945, and in 1950-1951 have been shown for equivalent mean fiber thickness classes in the 74s-58s region. In coarser fiber classes (56s-50s), the differences are much smaller. Table. Graphs. 4 references.

MAN-MADE FIBERS A 2

FINISHING SCHOOL FOR FIBERS. W. W. Heckert. Du Pont Mag. 51: 18-19 (Oct.-Nov. 1957). (3098)

The role of the research laboratory in developing the potentialities of synthetic fibers and fabrics is briefly reviewed as exemplified by the development of textured yarns, Schreiner calendering of nylon, twist setting, and the high-low shrinkage principle.

WHAT WE CAN EXPECT FROM OUR NEWER SYNTHETIC FABRICS. J. Home Econ. 49: 635-642 (Oct. 1957). (3099)

Panel discussion of the newer synthetic fibers and fabrics made from them at the textiles and clothing section meeting of the Am. Home Economics Assoc., St. Louis, June 1957. Acrilan, by B. F. Bertland, p. 635-636; Arnel and Fortisan, by W. E. Coughlin, p. 636-637; Dynel, by H. L. Carolan, p. 637-638; Fiberglas, by R. P. Deacon, p. 638-640; Verel, by G. W. Wernz, p. 640-641; Improved fabrics through blending, by E. K. Bispham, III, p. 641-642.

POLYACRYLONITRILE FIBER: NITRON. E. S. Roskin. Tekstil. Prom. 16, No. 11: 16-19 (1956). In Russian. Through BCIRA 37: 244 (1957). (3100)

The method of preparation, and spinning of Nitron fibers (formerly called Nitrilon) from dimethyl-formamide solution are described in detail. The fiber obtained by this method is very soft, elastic, strong, and twisted, and has the appearance of wool or natural silk, depending upon the temperature of formation and degree of drawing. Its breaking length is 45-50 km at an elongation of 12-20%. Addition of castor oil to the precipitating bath improves the elasticity and flexibility of the Nitron fibers.

ORLON FROM FIBER TO YARN. R. A. Wells (E. I. du Pont de Nemours & Co.). Textile Wkly. 57: 729-734 (Sept. 13, 1957); 779-780 (Sept. 20, 1957); Textile Merc. 137: 487-492 (Sept. 20, 1957); 527-533 (Sept. 27, 1957). (3101)

Turbo stapler, Pacific converter, and worsted and cotton system processing; blending; determination of skein shrinkage; yarn properties; etc.

NATURE OF "NITRILE ALLOY" FIBERS. O. R. McIntire (Dow Chemical Co.). (Letter to the editor). Man-Made Textiles 34: 82 (Sept. 1957). (3102)

The author states that Zefran is not based on vinylidene chloride as reported in a paper published in the February issue (see abstract 667) but is based on polyacrylonitrile. He also points out that Zefran has excellent dyeability.

DEVELOPMENT OF CRESLAN ACRYLIC FIBER. C. W. Bendigo (American Cyanamid Co.). Can. Textile J. 74: 65-66 (Oct. 18, 1957). (3103)

The dyeability of Creslan with various classes of dyes is discussed.

NYLON FOR BRUSHES. Fibres 18: 341-342 (Oct. 1957). (3104)

The useful qualities of nylon and the types of brushes in which it is used are outlined. Photographs.

NYLON STAPLE AND THE WORSTED SPINNER: UNIFORMITY OR VARIABILITY? Nylon Outlook 1: 4-7 (Autumn 1957). (3105)

Experiments comparing variable vs. uniform length nylon staple fibers on the worsted system of processing have shown the superiority of the variable length staple. The advantages are listed. Diagrams. Table. Photographs.

TEFLON: TEXTILE TOUGH GUY. Du Pont Mag. 51: 2-5 (Oct.-Nov. 1957). (3106)

The industrial end-uses of Teflon are discussed from the point of view of its unusual chemical and physical properties. Photographs. Table.

POLYETHYLENE FABRICS GAININC IN TEXTILE INDUSTRIAL USAGES. Am. Textile Reptr. 71: 55-63 (Oct. 17, 1957). (3107)

Polyethylene technology and textile uses are reviewed. Photographs.

FLOXAN: A NEW WOOL TYPE VISCOSE STAPLE FIBER. W. Bendel. Textil-Praxis 12, No. 3: 219-223 (1957). In German. Through BCIRA 37: 310 (1957). (3108)

Floxan is a new viscose fiber (developed by the Spinnfaser AG) which has the desired properties of wool (permanent crimp, fullness, and good dye affinity), can be advantageously processed in mixtures with wool, and takes up a remarkably low amount of dirt. It is particularly suitable for the manufacture of carpets and blankets.

MONOFILAMENT FABRICS FROM POLYVINYLIDENE CHLORIDE FIBERS (SARAN AND IGG-VESTAN). J. Wrieth. Textil-Rundshau 12, No. 3: 129-130 (1957). In German. Through BCIRA 37: 317 (1957). (3109)

On the basis of American experiences with Saran, the IGG (International Galalith-Gesellschaft, Germany) developed a similar product under the name of Vestan (mixed polymerizate from 85 parts polyvinylidene chloride and 15 parts vinyl chloride) in the form of twisted yarns (0.25 and 3 mm diameter) which can be used for the production of fabrics (car-seat covers), cords, ribbons, nets, filter-cloths, bath mats, etc. Physical and textile data, and resistance to chemicals of Vestan are listed.

PROCESSING OF ARDIL PROTEIN FIBER ON THE WORSTED SYSTEM. Textile Merc. 137: 305-306 (Aug. 23, 1957). (3110)

Part 1. Top making. Part 2. Drawing and spinning.

YARN PRODUCTION B

COTTON AND SYNTHETIC FIBERS--HOW TO MIX THEM. Bull. Inst. Text. France No. 64: 81-109 (Dec. 1956). In French. Through BCIRA 37: 313 (1957). (3111)

In this review the author discusses the main difficulties encountered in mixing cotton with synthetic fibers (the difficulty of obtaining mixtures with constant proportions, and the presence of static electricity) and general recommendations concerning the processing of these blends. Data are also given concerning the properties of some of the cotton/synthetic fiber blends. 37 references.

REPORT OF DISCUSSIONS OF QUESTIONS ON OPENING, PICKING, CARDING AND SPINNING. Textile Operating Executives of Georgia. Atlanta, Ga., 1957. 14 p. (3112)

Opening, picking and carding: cleaning stock, blending stock, calender rolls, two vs. three beater pickers, nylon condensers, static control, beater speeds, nep determination, regrinding flexible bends, lap waste, anti-friction compounds, and mote knives. Spinning, spooling and warping: traveling cleaners, spun vs. quilled filling, large ring spinning frames, anti-friction spindles, hi-drafting systems, top roll maintenance, scheduled doffing, open air creel, checking new quills, traveler cleaner adjustment, spooling, and warper and creel cleaning.

SOME PROBLEMS ASSOCIATED WITH THE PROCESSING OF MAN-MADE FIBERS. Fibres 18: 296-299 (Sept. 1957); 328-331 (Oct. 1957). (3113)

Viscose rayon staple (Fibro) and regenerated protein fiber (Fibrolane) on the woolen system. Part 2 discusses scouring and the use of light-scouring spinning oils where fibers may be damaged by alkali. Photographs. Tables. 6 references.

CARDING AND COMBING B 2

ELIMINATION OF DUST IN CARDROOMS. Shirley Institute. Textile Merc. 137: 523-525 (Sept. 27, 1957); Textile Wkly. 57: 858-862 (Sept. 27, 1957); Textile Recorder 75: 59 (Oct. 1957). (3114)

This discussion of the practical considerations relating to the installation of the Shirley "pressure point" system in mill cardrooms includes information on design, economics, operation, and maintenance. Diagrams.

THEORY OF FIBER HOOKS IN CONJUNCTION WITH THE DRAFTING AND COMBING PROCESSES IN COTTON. A. Wilhelm and H. Wagner. Textil-Praxis 12, No. 3: 223-229 (1957). In German. Through BCIRA 37: 314 (1957). (3115)

With reference to the theory of fiber hooks and its significance in drafting and combing, the authors examine the behavior of cotton fibers during spinning by using Blankophor (optical bleaching agent) which renders the fibers fluorescent in ultra-violet light so that they can be distinguished from the untreated fibers. It is shown that it is not the number of passages but the parallelization of the fibers that is essential for the reduction of combing waste and economical spinning.

THE EFFECT OF REDUCED SPEED OF THE FLATS ON THE CARDING OF COTTON. G. Merenyi. Textil-Praxis 12, No. 3: 211-218 (1957). In German. Through BCIRA 37: 313 (1957). (3116)

Experiments were carried out to ascertain (1) the relationship between the speed of the flats and the weight of flat strips; (2) loading of the card clothing; (3) nep and impurity contents in the card web; (4) changes in the mean fiber length at low speed of the flats. Results led to the conclusion that, by reducing the speed of the flats, a more accurate control within a wider range can be effected as regards the weight of flat strips than by the usual displacement of the stripping plate. Study of the effect of air currents on cards showed that the mean carding power is 40 times greater than the shearing stress of the air current, whereas the tractive force exceeds the shearing stress of the air current 4,000 times. For practical control of the weight of flat strips, gears with 5-6 velocities for changing the flat speed are recommended, by means of which the front stripping plate can be adjusted as closely as possible.

SLIVER EQUALIZATION ON COMBING MACHINE TABLES. F. A. Afonchikov, T. P. Bernikova and L. I. Khrenova. Tekstil. Prom. 16, No. 11: 25-26 (1956). In Russian. Through BCIRA 37: 248 (1957). (3117)

Experiments have shown that the sliver irregularity on combing machines can be reduced by placing the individual trays at a correct distance from the drafting device (in the experiments described, trays 2 and 5 were moved nearer to the drafting device).

DRAWING AND ROVING B 3

FIVE TABLES SIMPLIFY CARDROOM CALCULATIONS. N. H. Pomfret. Textile World 107: 110-111 (Oct. 1957). (3118)

These tables, based on frequently used roving frame twist and drawing production data, make it easy to determine turns per inch for a specific twist factor, twist gear for a specific twist factor, twist for rovings made of different cottons, and fly frame and drawing frame production.

NEEDLE BEARINGS IN THE TEXTILE INDUSTRY. PART 3. APPLICATION TO TOP ROLLERS. Torrington Co. Ltd. Textile Wkly. 57: 856 (Sept. 27, 1957). (3119)

Among the advantages of the Torrington needle bearing top rolls are the high load-carrying capacity provided by the full complement of precision ground needle rolls, easier assembly, reduced lubrication, closer roller settings, and reduced power consumption in the spinning room. For parts 1 and 2 see abstract 1972.

AUTOMATIC LENGTH INDICATOR FOR DRAW FRAMES. V. V. Omyachkin. Tekstil. Prom. 16, No. 11: 57-58 (1956). In Russian. Through BCIRA 37: 248 (1957). (3120)

The electrical device, described and illustrated, automatically stops the draw-frame after a given length of sliver (corresponding to the count of the yarn to be produced) has been deposited in the can, at the same time switching on a signal lamp. It is claimed that installation of this device on draw-frames increases their productivity by 146916 kg sliver/year and decreases the quantity of waste by 6246 kg/year.

MODERN WORSTED SPINNING PRACTICE. PART 6. ABRIDGED SYSTEMS OF WORSTED DRAWING. N. Roper. Textile Mfr. 83: 496-500 (Oct. 1957). (3121)

Abridged worsted drawing using the Autoleveller to ensure a constant delivered weight. Photographs. Diagram. 3 references.

IMPROVEMENT OF DRAW FRAME SLIVER REGULARITY FROM VISCOSE STAPLE FIBERS BY ELIMINATING INTERMITTENT DRAFTS. G. Herbert. Textil-Praxis 12, No. 2: 136-138 (1957). In German. Through BCIRA 37: 248 (1957). (3122)

With reference to findings by A. Wilhelm, a practical example is given of the application of theoretical research in spinning viscose staple fibers.

SPINNING, WINDING, TWISTING B 4

CASABLANCAS BOBBIN HOLDER FOR ROVING BOBBINS. Whitin Rev. 24: 60-61 (Sept. 1957). (3123)

The holder can be used with conventional wood creels or new type rod creels. As replacement holders in wood creels, it eliminates skewers and creel cups. Its advantages are cited. Photographs.

BOBBINS. A. K. Das. Indian Textile J. 67: 688, 681 (Aug. 1957). (3124)

Criteria for proper bobbin selection in spinning are given.

BLOCK CREELING IN SPINNING. R. Main. Textile Age 21: 10 (Oct. 1957). (3125)

Labor savings plus the improvement in fabric quality resulting from reduction of creeling slubs and doublings has created an interest in block creeling. A comparative time study with normal creeling is presented, the steps in adopting the method outlined, and its drawbacks considered.

FALSPIN MARK II FOR CRIMPED YARN PRODUCTION. S. & E. Scragg Ltd. Textile Wkly. 57: 931, 934 (Oct. 4, 1957). (3126)

The principle underlying the false-twist crimping machinery is that the adjacent sections of the filaments constituting the yarn are twisted in reverse direction. The latent energy in one half of the twist section is heat set and the opposing twist of the other half section is allowed to unwind. The result is a snarled or crimped yarn, whose bulk depends on the amount of twist and the weight of each filament. The improved features of the Falspin Mark II, as compared to the original Falspin, are described. Photograph.

SHIRLEY R.S. METER. Shirley Developments Ltd. Textile Merc. 137: 609, 632 (Oct. 11, 1957). (3127)

The R.S. Meter measures the differences in surface speeds of drafting rollers and expresses them as percentages. With the aid of this instrument the spinner is able to establish and maintain the best drafting conditions, determine the best roller setting, and detect roller slip. Photograph.

INCREASING WINDER-OPERATOR EFFICIENCY. F. Vogel. Textile World 107: 116-117, 202 (Oct. 1957). (3128)

Increased winding efficiency results from training operators to check yarn identification, excessive bobbin waste, short ends and knots, and bad detector drop wires.

HIGH DRAFT DEVICE. K. M. Guskin. Tekstil. Prom. 16, No. 11: 23-25 (1956). In Russian. Through BCIRA 37: 248 (1957). (3129)

The device is described and illustrated, and experimental results obtained with this device on ring-spinning machines are tabulated.

EFFECTIVE INCREASE OF COP WEIGHT ON COTTON SPINNING MACHINES. A. I. Zhidovich and B. M. Breidbard. Tekstil. Prom. 16, No. 11: 20-23 (1956). In Russian. Through BCIRA 37: 249 (1957). (3130)

Experiments have shown that the most effective means for obtaining a larger package weight are: correct relationship between the heights of spindle and bobbin (tube) (the end of the bobbin should not extend more than 15 mm beyond the spindle), increased ring diameter (with correspondingly decreasing velocity of the traveler), and correct position of the bobbin on the spindle.

SPINNING WITH INCREASED TRAVELER SPEED. F. Walz and H. Fetzer. Textil-Praxis 12, No. 2: 121-125 (1957). In German. Through BCIRA 37: 249 (1957). (3131)

The reduction of cost of the spinning process on the ring-spinning machine (increasing the weight of the cop) and problems involved (effects of different travelers, increase of lift, higher traveler speed, etc.) are discussed, and it is shown that, by using balloon rings, it is possible to increase the traveler speed by 25-30% by selecting suitable travelers (e.g. oval). Even at normal and low traveler speeds, the balloon rings make it possible to increase the delivery rate without increasing the number of yarn breakages. The "balloon rings" reduce the balloon and winding-on tension and have approximately the same (or smaller) diameter as the spinning rings, while "separating rings" prevent lashing of adjacent balloon threads and have a larger diameter than the spinning ring.

HOW TESTING TECHNIQUES HELPED WORSTED SPINNING CHANGES. J. Spencer (Spinners Ltd). Textile World 107: 98-99, 182-184 (Oct. 1957). (3132)

The conversion at Spinners Ltd. to long-draft roving and spinning and Autolevellers reduced operations from 6 to 4, saved 268 man hours, and increased production 16%. Details of the changeover and the testing procedures used for controlling yarn quality are described. Diagram. Graphs.

FEATURES AND ADAPTABILITY OF THE WOOLEN RINGFRAME. PART 13. J. A. B. Mitchell. Textile Mfr. 83: 511-513, 531 (Oct. 1957). (3133)

The quality and output of yarn produced on the ring frame and mule are compared. Frame-spun yarn was found to be as good as that made on the mule under similar conditions of twist and count, from the same material, and the output of yarn per frame spindle from 2 to 3 times that obtained from the mule.

SPINNING ENDS-DOWN COLLECTION. G. Archer (Pneumafil Corp.). Textile Bull. 83: 91-96 (Oct. 1957). (3134)

The pneumatic ends-down collection system and its effect on the quality of yarns produced with it are described. Some of the problems faced in the selection and installation of such a system are explained. Photographs.

ECONOMICAL SPEEDS FOR TWISTING. F. Fourné. Melliand Textilber. 38, No. 3: 246-249 (1957). In German. Through BCIRA 37: 281 (1957). (3135)

Cost calculation for twisting machines with several rows of bobbins shows that the most economical spindle speed for the production of normal yarns ranges for cop weights of 500-600 g from 10,000-12,500 rev/min; above 12,500 rev/min, the production costs increase considerably on account of the high power consumption.

PREPARATORY MACHINES FOR PROCESSING CHEMICAL FIBERS. J. Schneider. Reyon Zellwolle Chemifasern No. 2: 118-120; No. 3: 189-195 (1957). In German. Through BCIRA 37: 314 (1957). (3136)

In this review, the author discusses the production and characteristics of stretch, high-bulk, and high-twist yarns and describes twisting machines for yarns from chemical fibers (ring-doubling machines, machines with several rows of bobbins, double-twist doubling machines, and cord twisting machines).

TWISTER CABLER FOR TIRE CORDS. Platt Bros. Textile Wkly. 57: 1003-1004, 1007 (Oct. 11, 1957); Textile Merc. 137: 607-609 (Oct. 11, 1957). (3137)

Mechanical features and advantages of the Platt-Bright machine for viscose and nylon cabling. Photographs.

WHITIN SPEED-MATIC AUTOMATIC FILLING BOBBIN WINDER. Whitin Rev. 24: 10-19 (Sept. 1957). (3138)

Mechanical features, operation, and production data. Diagrams. Photographs. Table.

WHITIN-SCHWEITER FILL-MASTER AUTOMATIC FILLING BOBBIN WINDER. Whitin Rev. 24: 20-29 (Sept. 1957). (3139)

Mechanical features, operation, and production data. Diagrams. Photographs. Table.

WHITIN-SCHWEITER TYPE MS AUTOMATIC FILLING BOBBIN WINDER. Whitin Rev. 24: 30-35 (Sept. 1957). (3140)

Mechanical features, operation, and advantages. Photograph.

SCHWEITER COP WINDERS. Whitin Rev. 24: 36-39 (Sept. 1957). (3141)

Models MT, MTL, MTA, and MTAL make cops having various lengths and diameters which usually are wound off from the inside; model MTS produces cops which wind off the outside. Features of all models are described. Photographs. Tables.

DEVELOPMENT OF AUTOMATION AND HIGH PRODUCTIVITY IN MODERN FILLING BOBBIN WINDERS. Whitin Rev. 24: 2-7 (Sept. 1957). (3142)

CALCULATION OF PIECE RATES IN CONE WINDING. R. Porter. Textile Recorder 75: 56-58 (Oct. 1957). (3143)

A piece rate system for cone winders which is based on the number of packages wound instead of the usual method of payment according to weight is described.

YARNS B 5

EXPERIMENTAL YARNS FROM PARTIALLY ACETYLATED COTTON AND BLENDS WITH UNTREATED COTTON. W. G. Sloan, C. L. Sens and E. M. Buras, Jr. (Southern Regional Res. Lab.). Textile Research J. 27: 796-802 (Oct. 1957). (3144)

Blending resulted in better mechanical processing and improved yarn properties at a lower cost. Blending high acetyl PA cotton with 40% raw cotton was considered to be the best method of preparation. PA stock prepared from a rain-grown cotton exhibited better mechanical processing characteristics than stock prepared from a longer-staple irrigated cotton. However, yarns spun from the latter type of PA cotton had better properties of strength, elongation, and flex abrasion resistance. The use of a higher twist multiplier in spinning and plying resulted in PA cotton yarns having improved properties of elongation and flex abrasion resistance. Graphs. Tables. 5 references.

PRODUCTION OF KNOTLESS TUFTING YARNS. Taylor & Hargreaves Ltd. Man-Made Textiles 34: 57, 59 (Oct. 1957). (3145)

TEXTURED YARNS: TODAY AND TOMORROW. J. A. Martini (Duplan Corp.). Textile Merc. 135: 1055-1062 (Dec. 28, 1956). (3146)

A general review of developments and applications.

THIS IS BAN-LON. K. Brown (Qualitaire Mills Pty. Ltd). Textile J. Australia 32: 600-603, 608 (July 20, 1957). (3147)

The properties and end-uses of Ban-Lon are surveyed.

FIBER ARRANGEMENT IN THE YARN CROSS SECTION IN SOME FIBER BLENDS. L. Rudolph. Z. ges. Textil-Ind. 59, No. 6: 183-187 (1957). In German. Through BCIRA 37: 264 (1957). (3148)

Experiments on yarn blends from fibers with varying staple length and fineness (wool-viscose staple, polyacrylonitrile-viscose staple) showed no preference in the distribution of certain fiber types in the yarn cross-section. This disproves the theory of the layer structure of blended yarns.

TEXTILE CONTROL IN TIRE PRODUCTION. R. S. Goy. J. Textile Inst. 48: P637-P647 (Sept. 1957). (3149)

The properties required of a tire cord are summarized and tests designed to control quality and performance are described. Tables. Graphs. 8 references.

SEWING THREADS IN THE CLOTHING INDUSTRY. P. Van Oost. Rayonne fibres synth. 13, No. 3: 289-298 (1957). In French. Through BCIRA 37: 318 (1957). (3150)

The sewing properties of threads are examined, with reference to mechanical characteristics: tenacity and elongation, resistance to shearing stress and friction, and mechanical performance required.

USE OF BULKED YARNS IN WEAVING. J. L. E. Seidler. Skinner's Silk & Rayon Record 31: 1081-1084 (Oct. 1957). (3151)

The procedures and possibilities arising from the use of textured yarns in woven fabrics (with Taslan, Helanca, Agilon, and Ban-Lon as examples) are discussed. Photomicrographs. Graph.

COMBED ROVING TWIST FORMULA. J. Simpson, J. R. Corley and G. G. Schnabel (Southern Regional Res. Lab.). Textile Research J. 27: 812-818 (Oct. 1957). (3152)

Twist required in rovings of combed cottons for good processing and drafting qualities varies directly with the hank roving, fiber fineness, and the variation of fiber length, and varies inversely with the percent noils removed and fiber length. Four of these variables were incorporated into a formula, and a correction method was devised for the fifth variable. A nomograph based on this formula enables rapid determination of the twist required in rovings ranging from 0.25-10.0 hank, using combed cottons varying widely in fiber fineness, staple length, and percent noils removed. Tables. Graphs. 8 references.

FABRIC PRODUCTION C

REPORT OF DISCUSSIONS OF QUESTIONS ON MAINTENANCE, SLASHING AND WEAVING. Textile Operating Executives of Georgia. Atlanta, Ga., 1957. 15 p. (3153)

Maintenance: humidifying systems, floor maintenance, loom maintenance, cleaning and replacing fluorescent lights, moisture condensation on walls, cleaning and lubrication of motors, etc., responsibility for maintenance, and maintenance of loom stop motions. Slashing: size viscosity control, low pressure vs. high pressure cylinders, metallic yarns, pneumatic press rolls, leasing of warps, slasher waste, stretch control, and size pick-up variation. Weaving: overhead loom cleaners, loom cleaning schedules, vacuum cleaners for looms, type IV twills, shuttle checks, endless check straps, loop check straps on multiple box looms, plastic vs. regular shuttles, selvage control, and dobby head maintenance.

WARPING, SLASHING, YARN PREPARATION C 1

SOME PHYSICAL AND CHEMICAL PROPERTIES OF TAMARIND KERNEL POWDER. PART 1. ASSESSMENT OF COPPER NUMBER AND ALKALI LABILE VALUE OF RAW, ROASTED, AND PURIFIED TKP. W. G. MacMillan, S. Nag and I. B. Chakraverti (Indian Jute Mills Assoc.). J. Sci. and Ind. Research (India) 16B: 418-425 (Sept. 1957). (3154)

NEW METHOD OF SIZE DISTRIBUTION OVER THE WIDTH OF THE WARP. V. M. Rybakova. Tekstil. Prom. 16, No. 12: 27-29 (1956). In Russian. Through BCIRA 37: 251 (1957). (3155)

Experiments have shown that the amount of size deposited on the yarn is greatly affected by the wear of the cloth covering the top squeezing roller. In order to ensure uniform size distribution over the whole width of the warp, covering of the center part of the cloth with a smooth cotton fabric was found to be of great advantage.

CONTROL IN THE PRODUCTION OF SIZED WARPS OF CONTINUOUS FILAMENT YARNS AND ITS INFLUENCE ON CLOTH QUALITY. N. Jackson and J. H. MacGregor. J. Textile Inst. 48: P591-P614 (Sept. 1957). (3156)

The preparation and sizing of warps of continuous filament yarns made from rayon and other man-made fibers are reviewed and discussed. The value of controls at every possible stage of the various processes and the influence of these controls on the quality of the woven fabrics are described and emphasized. The part played by the sizing materials themselves is also discussed. Diagrams. Graphs. 4 references.

SIZING OF RAYON FILAMENT YARNS. H. L. Röder and A. J. N. van Tilborg. Enka Breda Rayon Rev. 11: 109-117 (Sept. 1957). (3157)

Results of an investigation of the amount of stretch which takes place in the various zones of a three-cylinder slasher are presented, and it is recommended that not only should the total stretch be specified, but the stretch in the various zones should also be measured or prescribed for satisfactory sized yarn. Tables. Photographs.

VARIATIONS IN TENSION OF AN UNWINDING THREAD. K. H. V. Booth (Univ. of London). Brit. J. Appl. Phys. 8: 142-144 (Apr. 1957). (3158)

The variations in tension occurring as a thread is pulled with uniform speed from a cylindrical spool are considered. For simplicity the steady state case when the thread follows a curve of constant shape on the surface of the spool is taken. It is shown that there is a limiting value, depending on the tension of winding and speed of the thread, for the angle with which the thread leaves the spool. Curves are given from which it is possible to estimate the variations in tension as the point of unwinding moves up the spool surface. Diagrams. Graphs.

PREPARATORY MACHINES FOR INDUSTRIES PROCESSING MAN-MADE FIBERS. J. Schneider. Reyon Zellwolle Chemiefasern No. 1: 26-35 (1957). In German. Through BCIRA 37: 250 (1957). (3159)

The principles of precision winding are discussed, and machines for winding Perlon, nylon, etc. yarns, e.g. the Monofil-Coner, the Bikomat, the Makromat, and the Barmag winding machine, are described and illustrated.

SCHARER SUPER SPEED FULLY AUTOMATIC PIRN WINDER. Textile Merc. 137: 564-566 (Oct. 4, 1957). (3160)

Features of the HHBEV winder. Photographs.

SLASHER SIZING WARPS OF FILAMENT ACETATE. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. May 1957. 3 p. Bull. A-32. Free. (3161)

Representative size formulas for conventional and loom-finished fabrics are included. Table.

MODERN JUTE MANUFACTURING PRACTICE: TECHNIQUE AND MACHINERY IN YARN PREPARATION. S. A. G. Caldwell. Textile Mfr. 83: 501-503 (Oct. 1957). (3162)

PROTECTION OF COPPER SURFACES OF SIZING MACHINES. A. I. Reibman and M. I. Finkelshstein. Tekstil. Prom. 16, No. 12: 47-48 (1956). In Russian. Through BCIRA 37: 251 (1957). (3163)

For protecting the surfaces of sizing troughs and rollers against the deposition of copper sulfide when using chloramine-containing sizes or when sizing viscose yarn, coating of the surfaces with asbovinyl (asbestos powder and varnish, 55:45) or Bakelite varnish has proved effective for a period of several months.

WEAVING C 2

OVERCOMING LASHERS-IN ON NORTHROP AUTOMATIC LOOMS. Textile Wkly. 57: 1534-1535 (May 31, 1957). (3164)

The LGC weft control for cotton and rayon weaving and the GC weft control for woolen and worsted are expressly made to overcome lashers-in on already existing Northrop automatic looms, models F, LF, and S. The sequence of operation with the LGC weft control installed on a model LF 2 x 1 Northrop automatic loom is illustrated with photographs.

SRRL LOOM ATTACHMENT FOR WEATHERPROOF FABRICS. Textiles in Industry 2: 98 (Sept./Oct. 1957). (3165)

This simple and inexpensive attachment for standard textile looms permits weaving extra-dense cotton fabrics with an inherent water- and wind-resistance that lasts as long as the fabric. The advantages of these fabrics are briefly outlined, and the use of the attachment for weaving higher quality and hard-to-weave fabrics is mentioned. 4 references.

SHUTTLELESS LOOM USES TAPES TO INSERT FILLING. Draper Corp. Daily News Record No. 220: 22-23 (Nov. 11, 1957). (3166)

Steel tapes wound on two wheels on either side of a loom and able to dart in and out of the warp shed inserting filling picks will apparently be the heart of a shuttleless loom soon to be released to the textile industry by the Draper Corp. Information given in patents 2 810 403, 2 604 123, and 2 641 285 is discussed. Diagrams.

STUDY IN LOOM FIXING. PART 16. F. D. Herring. Textile Bull. 83: 96-99 (Oct. 1957). (3167)

Checking and adjustment of shuttle boxing and picking motion.

WEAVING FOR QUALITY. Textile Bull. 83: 99-100 (Oct. 1957). (3168)

Fundamentals of quality weaving and their application by the individual weaver are discussed.

DETECTION DURING WEAVING OF UNCONTROLLED THREADS. J. Martel. Industrie Textile: 48-50 (Jan. 1957). In French. Through BCIRA 37: 285 (1957). (3169)

The device described for detecting faults in warp threads is based on scanning the space between the two sheets of warp threads by means of a flat beam of light. Any disorder of the threads in this zone instantaneously interrupts the operation of a photoelectric cell, mounted in such a manner that it causes stopping of the loom or release of a signal.

PRODUCTION OF TERRY PLUSH. H. F. Steinert and W. Te Uhle. Z. ges. Textil-Ind. 59, No. 6: 190-196 (1957). In German. Through BCIRA 37: 252 (1957). (3170)

Techniques and loom construction are described and illustrated.

PROBLEMS FOR THE WEAVING OVERLOOKER. H. Barlow. Textile Recorder 75: 62-64 (Oct. 1957). (3171)

The two difficulties affecting shuttle traverse in dobby and jacquard shedding, (1) the raceboard moving in an arc of a circle against a straight bottom shed line and (2) the insufficient dwell are discussed. The design and operation of the variable dwell dobbies manufactured by George Hattersley & Sons Ltd. and William Dickinson & Sons, as well as the variable dwell device for double-lift jacquard machines manufactured by G. C. Rutherford, are described. Diagrams.

SET SHUTTLE FEELERS RIGHT FOR TOP LOOM PERFORMANCE. W. C. Westbrook. Textile World 107: 130-131 (Oct. 1957). (3172)

Basic rules for setting the feeler are given, and the use of a gauge for this purpose is described. Diagrams.

HARNESS CONSTRUCTION. J. Schneider. Melliand Textilber. 38, No. 3: 251-257 (1957). In German. Through BCIRA 37: 285 (1957). (3173)

Constructional details of various types of shafts are described and illustrated.

CARE OF LOOM TEMPLES. R. B. Pressley. Textile World 107: 114-115, 188 (Oct. 1957). (3174)

Recommendations for choosing rolls for different fabrics, selection of proper temple parts, eliminating temple marks, and temple care. Photographs.

KNITTING C 3

DOUBLE-FACED PLUSH FABRICS. De Sereville Etabs. Textile Merc. 136: 328-331 (Feb. 22, 1957). (3175)

Construction and operation of the De Sereville French machine for double-sided weft-knitted plush fabrics.

MODERN TRENDS IN WEFT KNITTING. J. B. Lancashire. Textile Recorder 75: 60-61 (Oct. 1957). (3176)

Recent developments in the manufacture and design of full-fashioned stockings, men's half hose, children's socks, and various types of weft knitted fabrics, underwear, and outerwear.

LACE PATTERNING IN FULL-FASHIONED OUTERWEAR. Hosiery Trade J. 64: 94-95 (Oct. 1957). (3177)

Features and operation of the Scheller lace pattern unit, designed as an attachment for the Scheller full-fashioned outerwear machines, are described. Photographs.

AUTOMATIC KNITTING OF CABLE STITCH ON V-TYPE MACHINES. Hosiery Trade J. 64: 86-87, 100 (Oct. 1957). (3178)

The mechanism by which the Stoll Dofuma stitch transfer double-system non-jacquard machine automatically produces the cable stitch by loop transfer is described. Diagrams.

WALTEX "LOOM" CREATES NOVEL METHOD OF FABRIC PRODUCTION. Ditta A. Caperdoni. Textile Wkly. 57: 565, 592 (Aug. 30, 1957); Textile Recorder 75: 70-72 (Oct. 1957). (3179)

This machine has several unique features which make it difficult to classify in conventional terminology. Although the makers refer to it as a loom, it would be more accurate to describe it as a two-beam warp knitting machine with weft thread attachment. Six weft threads can be laid in the fabric, either separately or together. The weft ends are laid in by a shuttle and taken across the fabric during the knitting cycle by a traverse bar. Two arms automatically push the threads between the two rows of knitting needles. The action of the weft attachment is controlled by an ordinary dobby.

NEW BRITISH-BUILT OUTERWEAR LINKERS. S. A. Monk Ltd. Hosiery Trade J. 64: 90-91 (Oct. 1957); Hosiery Times 30: 17 (Oct. 1957). (3180)

The Samco single thread chain stitch steady dial collar linker is described. Photographs.

BOEHRINGER BC 32 FULL-FASHIONED HOSIERY MACHINE. Hosiery Trade J. 64: 84-85 (Oct. 1957). (3181)

Built in either 32, 36 or 40 sections and the usual range of gauges, the new machine has a maximum speed of 110 to 120 courses per minute, according to gauge and width of sections. Mechanical features are described. Photographs.

ELASTIC POWER NETS: PLAIN AND FIGURED. Hosiery Trade J. 64: 92-93 (Oct. 1957). (3182)

The method of knitting power net on Raschel machines is explained.

LEG-LENGTH VARIATIONS IN FULL-FASHIONED HOSE. Nylon Outlook 1: 23-26 (Autumn 1957). (3183)

Variations in leg-length due to yarn, knitting, and finishing are discussed. A list of suitable methods for estimating leg-length is included. Photographs.

FABRICS C 4

ACID CONTROL IN FELTMAKING. T. Barr and G. McLeavy. J. Textile Inst. 48: P615-P636 (Sept. 1957). (3184)

On the basis of surveys made of existing methods of processing in factories for the manufacture of both wool- and fur-hat felts, procedures have been devised for controlling the acid content of the material during felting. Tables. Graphs. Diagram. 25 references.

FUR FELT HATS. W. F. Ferrazano (Allied Chem. & Dye Corp.). Dyestuffs 42: 79-88 (Sept. 1957). (3185)

Details of the preparation of fur for use in hat making and the manufacture of the hats are given. Photographs.

HOW ZEFRAN PERFORMS IN FABRICS. O. R. McIntire (Dow Chem. Co.). Modern Textiles Mag. 38: 59-64 (Oct. 1957). (3186)

This report on the properties of Zefran and Zefran blends in experimental fabrics and garments includes data on bulk, dimensional stability to laundering, wrinkle recovery, pilling, bacterial and fungal resistance, dyeability, and serviceability. Graphs. Photographs.

SERVICE QUALITIES OF WOOL AND WOOL-BLENDED SUITINGS. B. Densmore. J. Home Econ. 49: 649-651 (Oct. 1957). (3187)

Suitings of 100% wool, wool/nylon, and wool/Orlon were tested for resistance to abrasion, grab breaking strength, and tearing strength, as indications of wearing quality. The all-wool fabrics were more quickly affected by abrasion than were the blends. The addition of nylon or Orlon to wool tends to give it greater strength. Tables. Graphs. 5 references.

WOOL AND MAN-MADES GO WELL TOGETHER. J. B. Goldberg. Modern Textiles Mag. 38: 42-44, 71 (Oct. 1957). (3188)

The existing possibilities for the use of rayon, nylon, Vicara, Orlon, Acrilan, and Dacron with wool for apparel fabrics are evaluated from the viewpoint of appearance, serviceability, and economics.

NONWOVEN TEXTILES: SPECIAL REPORT ON CURRENT ACTIVITIES. Textile Bull. 83: 57-81 (Oct. 1957). (3189)

Latex binders for nonwovens, p. 62-65; Fiber properties best suited for specific nonwoven applications, p. 65-67; Nonwoven textile battings, p. 68-69; Nonwoven textile felts, H. G. Lauterbach, p. 70-71; Nonwoven fabrics and their place in the textile industry, W. M. Klothe, p. 72-76; Prescription for textiles: nonwovens. F. N. Cooper, p. 76-78; England's progress in the nonwoven field, L. Walter, p. 78-81. Diagrams. Photographs. Tables.

CLOTH TERMS AND PARTICULARS: COTTON FABRICS: SATINS, SATEENS, CREPES, AND TOWELLING. W. Middlebrook. Textile Mfr. 83: 505-507 (Oct. 1957). (3190)

NONWOVEN FABRICS. E. Stocker. Textil-Rundschau 12, No. 2: 77-81 (1957). In German. Through BCIRA 37: 248 (1957). (3191)

The historical development of techniques for the production of nonwoven fabrics is reviewed, with reference to the use of these fabrics in the clothing industry.

NYLON NETS A RECORD CATCH. Nylon Outlook 1: 8-11 (Autumn 1957). (3192)

Nylon nets have proved themselves superior in many diverse applications to nets made from other fibers because of their ease of handling, lightness, elasticity, strength, and durability. Several of the more important markets for fishing nets are discussed to show how each one presents different problems to the net maker.

SOME ASPECTS OF PERMEABILITY TO AIR AND ITS DEPENDENCE ON CLOTH STRUCTURE. B. S. V. Rao and B. C. Mohanty. Indian Textile J. 67: 670-674 (Aug. 1957). (3193)

This paper deals with the influence of change of picks and weaves upon the property of permeability to air of fabrics of certain structures. The weaves selected were plain, 2/2 twill, 2/2 matt, and 2/2 broken twill, and cloths were woven in each of the above weaves with varying picks per inch to compare the influence of: (a) number of picks per inch with same weave; (b) average float of weaves with square setts; and (c) different weaves with same setts on the air permeability of fabrics. Photograph. Tables. Graphs. 4 references.

KNITTED MESH PRODUCTS. Knitted Mesh Mfg. Co. Textiles in Industry 2: 85-86 (Sept./Oct. 1957). (3194)

The special characteristics and applications of KnitMesh, a mesh structure of asymmetrical, interlocking loops, knitted from metals or plastics, are described. Applications include filtering, electronic shielding, vibration control and cushioning, heat exchange, etc.

TERYLENE REINFORCED INDUSTRIAL HOSE. Textiles in Industry 2: 83-84 (Sept./Oct. 1957). (3195)

The main advantages of Terylene over other textiles in this field are cited, and illustrations of specific uses for Terylene reinforced hoses are given.

INDUSTRIAL FABRICS. Am. Textile Reptr. 71: 13-52 (Oct. 24, 1957). (3196)

"New type polyethylenes may rival other plastics, fibers," p. 13-15, 46, 47; "Nyvel coated nylon fabric looks to industrial uses," p. 16, 48; "New plastics bid for special non-fabric textile markets," p. 17-19, 43; "Industrial fabric development calls for concentrated teamwork," p. 20, 44, 45; "Pressure-sensitive cloth tapes can enjoy an expanding market," p. 29-31, 45; "Use of rayon is growing in industrial applications," p. 49-50; "Synthetic fibers used in filter fabrics," p. 52.

TEXTILES IN THE AIRCRAFT INDUSTRY. Textiles in Industry 2: 89-90 (Sept./Oct. 1957). (3197)

Some interesting and unusual applications are reviewed (e.g. cables, packing, casing, survival equipment, insulation).

INDUSTRIAL TEXTILES. J. Davenport, Jr. Manufacturers Record 126: 23-28 (Nov. 1957). (3198)

Industrial textile development in the South is briefly surveyed. A list is given of Southern firms, employing 100 or more persons, manufacturing industrial textile items.

TERYLENE FOR THE MOTOR INDUSTRY. Textiles in Industry 2: 91-92 (Sept./Oct. 1957). (3199)

The use of Terylene for brake hose, safety harnesses, tow rope, upholstery, etc., is discussed.

COMBINATION LOOP EFFECTS FOR PATTERN ELABORATION. W. Davis. Hosiery Times 30: 14-17 (Oct. 1957). (3200)

Designs possible on the newest flat power machines on which varied loops having different appearance and structure can be produced. Photographs. Diagrams.

WOVEN FABRIC STRUCTURE: FANCY PATTERNS IN BROKEN TWILL WEAVES. D. C. Snowden. Man-Made Textiles 34: 55 (Oct. 1957). (3201)

PATTERNING PRINCIPLES IN WEFT KNITTING: KNIT-AND-MISS DESIGNING METHODS. J. Rab. Man-Made Textiles 34: 52 (Oct. 1957). (3202)

JACQUARD EFFECTS IN STITCH AND COLOR. J. B. Lancashire. Hosiery Trade J. 64: 66-68 (Oct. 1957). (3203)

This article is concerned with fancy weft knitted fabrics in which stitch and color effects are combined, and the term jacquard embraces all figured textures other than those incorporating solid designs (intarsia work) and those that involve plating. Photographs.

CAUSE AND CURE OF WHITE SPOTS IN MOHAIR PLUSH. J. Stavridis and J. B. Speakman (Leeds Univ.). J. Textile Inst. 48: T362-T373 (Sept. 1957). (3204)

The white spots which develop in mohair plush when it is used as an upholstery fabric are due to the presence of looped fibers in the pile. Loops of various kinds are formed by reversal of (usually) the leading ends of the fibers where friction is encountered in the spinning of the single yarn, and by projecting hairs during folding of the twofold yarn. All methods of spinning give faulty yarn, and the formation of looped fibers cannot be prevented by varying the type of lubricant on the fibers. The simplest method of making a perfect plush is to break all the looped fibers in the cut-pile with a Tiger raising machine in finishing. When the plush has developed white spots during use, the defect can be removed by damping the fabric and brushing with a stiff brush and redevelopment prevented by breaking the looped fibers with a strip of card wire. Photographs. Tables. 4 references.

TIPS ON FABRIC DESIGN FOR BETTER LOOM OPERATION. D. L. Garrett. Textile World 107: 139, 190-192 (Oct. 1957). (3205)

Methods of improving fabric design to eliminate selvage contraction, shuttle marks, and false stops are discussed. Diagrams.

DESIGN IN WOVEN STRUCTURE. PART 58. FANCY DIAMOND PATTERNS. D. C. Snowden. Wool Rev. 31: 34-35 (Oct. 1957). (3206)

ORNAMENTATION OF APPAREL FABRICS: WEAVING COMBINATION STRIPES AND SPOTS. PART 6. V. Lobel. Modern Textiles Mag. 38: 46-48 (Oct. 1957). (3207)

FASHION FABRICS IN WOOL. Textile Merc. 137: 603-606 (Oct. 11, 1957). (3208)

The construction and finishing of a boucle knop tweed, a basket tweed, and a flecked basket effect are explained.

FINISHING AND CHEMICAL PROCESSING D

TEXTILE APPLICATIONS OF FLUID BEDS. J. Wilson and F. G. Audas. Textile Mfr. 83: 527-530 (Oct. 1957). (3209)

Report of work done by the British Rayon Research Association on the use of fluid beds for drying, crease-proofing viscose rayon, and dyeing with disperse, azoic, and Procion dyes. Diagrams. Tables. 9 references.

ACTIVE TRADE NAMES OF TEXTILE FINISHERS. Daily News Record No. 198, Sect. 2: 28-34, 38-43 (Oct. 10, 1957). (3210)

A list of some of the prominent trademarked names in the finishing industry. Those listed for the most part are open to the trade at large either by sale or license. Names confined by a company to its own product have generally been omitted. Manufacturers, the fibers to which the finishes are applied, and the properties imparted are listed.

CHEMICAL PROCESSES D 1

ABSORBENCY IN COTTON BLEACHING. Textile Mfr. 83: 523-526 (Oct. 1957). (3211)

The effects on cotton absorbency of chemical pretreatment before caustic boiling, of kier boiling, of steaming time and caustic concentration in continuous bleaching process, and of peroxide, hypochlorite, and chlorine are critically examined, with reference to reports in the literature. 8 references.

NEW BLEACHING METHOD FOR ORLON. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. July 1957. 2 p. Bull. OR-83. Free. (3212)

In this procedure an acid scour is combined with the application of a blue tint and a fluorescent white dye at the boil.

RESIN FINISH BEATS FIRE BUT NOT COST. Skinner's Silk & Rayon Record 31: 1057 (Oct. 1957). (3213)

Despite the fact that Proban flameproof finish is completely permanent to wearing and washing, its use is limited because of its high cost.

BLEACHING WITH CHLORITE ACTIVATED BY MEANS OF ORGANIC ESTERS. J. Rosset and Y. Guyonnet. Teintex 22, No. 3: 181-194 (1957). In French. Through BCIRA 37: 320 (1957). (3214)

Bleaching in an ordinary bath (1) and continuous bleaching by impregnation (2) should be considered separately to ascertain the following advantages of the ester-activated over the acid-activated process. In (1) there is practically negligible chlorine-dioxide liberation as compared with the 10-20 times higher ClO_2-evolution in the case of acids; reduced formation of secondary products useless for the bleaching process (ClO_3- and Cl-); possibility of working in a continuous bath; degree of whiteness comparable to that obtained in acid medium. In (2), activation by means of ethyl tartrate makes it possible to reduce the vaporization time to 1/2 hour; to eliminate the husks without boiling; to operate continuously on suitable machines. These results, which are associated with the use of high temperatures, cannot be obtained in acid medium without considerable evolution of chlorine dioxide and corrosion of the plant.

NEW ASPECTS OF THE PAD-ROLL SYSTEM. B. Mellbin (Svenska Textilmaskinfabriken AB). Am. Dyestuff Reptr. 46: 770-776 (Oct. 21, 1957). (3215)

The use of the pad-roll system for dyeing, desizing, boiling-off, and bleaching (particularly sodium chlorite bleaching) is explained. Diagrams. Photographs. 4 references.

CHEMICALLY MODIFIED CELLULOSE FIBERS: NEW EXPERIMENTAL INDICATIONS. A. J. Hall. Fibres 18: 335-340, 353 (Oct. 1957). (3216)

The advances made in modifying the cellulose molecule are briefly reviewed, and new methods for modifying cellulose, differing from the older methods in that they involve the cellulose molecules in chemical union with large complex groupings in contrast to the small radicals favored earlier, are described. The long chain molecules may be introduced with or without cross-linking. Patent references are given and theoretical and practical implications discussed.

FINISHING NYLON TRICOT. Brit. Nylon Spinners. Textile Wkly. 57: 1038-1042 (Oct. 11, 1957). (3217)

Recommendations are given for fabric preparation, drying and setting, bleaching and dyeing, and final drying, including modification to meet specific requirements, such as preparation of fabrics for permanent pleating, finishing of fluted type fabrics and other speciality constructions.

CARBONIZING WOOL STOCK: AN IMPROVED SULFURIC ACID METHOD. Wool Bureau, Inc., 16 West 46 St., New York 36, N.Y. Oct. 1957. 8 p. Wool science and technology report no. 1. Free. (3218)

Recently, the Commonwealth Scientific and Industrial Research Organization (Australia) described an improved sulfuric acid-carbonizing technique. (See TTD abstract 1611.) This report briefly outlines the important laboratory and mill development work on this improved process in which the addition of surface-active agents to the sulfuric acid bath prevents excessive loss in fiber tensile strength, and thereby improves the yield of carbonized wool.

IMPARTING FLAME RESISTANCE TO COTTON BY THE USE OF THPC. Textiles in Industry 2: 93-94, 97 (Sept./Oct. 1957). (3219)

A typical laboratory-scale application of the THPC finish is described, and some observations on the procedure and fabric properties are made.

AUTOMATIC CONTROL OF THE APPLICATION OF SIZING AND FINISHING SUBSTANCES IN CONTINUOUS WET PROCESSING. E. H. Jones. J. Textile Inst. 48: P569-P590 (Sept. 1957). (3220)

With conventional equipment, precise control of sizing or finishing substances is often very difficult, if not impossible, because of the unknown effects of variations in the absorbency of the material, in the properties of the liquor, and in the conditions imposed by the machine used to apply the liquor. The effect of these and other variables can be completely compensated for automatically and continuously by the systems of control described in this paper. An account is given of the basic principles of the control systems. Some practical adaptations to various wet processes, including warp sizing and cloth finishing, are outlined. Diagrams. Graphs. 5 references.

FILMING AMINES AS CORROSION INHIBITORS. T. B. Fielden (Rodol Ltd). Dyer 118: 589-590 (Oct. 11, 1957). (3221)

The corrosion of dyeing and finishing machinery may be eliminated by the use of long-chain aliphatic primary amines of suitable chain length which, when introduced to a steam/condensate system, act in a similar way to wetting agents, and are attracted to the H_2O/metal interface. The polar-NH_2 group becomes attached to the metal, and the non-polar fatty chain forms a water-repellent film of approximately monomolecular thickness. This film functions as a highly effective corrosion inhibitor and the corrosive action of condensate containing dissolved oxygen and carbon dioxide is eliminated.

PROPERTIES OF WOOL MODIFIED WITH DIFUNCTIONAL ISOCYANATES. J. E. Moore and R. A. O'Connell. Textile Research J. 27: 783-787 (Oct. 1957). (3222)

The reaction of wool with toluene-2,4-diisocyanate and hexamethylene diisocyanate is described. The treated wools exhibit greater resistance towards solubilization in hot acid and alkali and towards attack by several other chemical agents. The wet single-fiber stress-strain properties exhibited below 30% extension are only slightly affected by treatment with isocyanates. The values for stress at break and elongation at break, however, are considerably lowered by treatment with difunctional isocyanates, but not with phenyl isocyanate. Fabric stiffness and crease recovery are only slightly affected by the isocyanate pickups studied. Tables. 11 references.

THEORETICAL AND PRACTICAL ASPECTS OF THE USE OF RESINS FOR CREASE-RESISTANCE. J. T. Marsh. Textil-Rundschau 12: 485-494 (Sept. 1957). In English. (3223)

The nature of resins and the need for quality control of the finished product are emphasized.

OBSERVATIONS ON THE LAUNDERING OF THE NO-IRON SHIRT. C. H. Bayley and A. S. Tweedie. Tech. Bull. Canad. Res. Inst. Laund. Clean. 12, Tech. 1 and 2: 2-5 (1957). (3224)

Commercial laundry trials and laboratory tests have demonstrated the liability to tendering (due to chlorine retention) of resin-treated cotton shirts and shirtings washed in liquors containing hypochlorite. Five commercial launderings in a liquor containing only 0.004% available chlorine produced a breaking strength loss after hot pressing of 5%. Laboratory tests with 0.01, 0.03, 0.06, 0.10, and 0.25% available chlorine produced strength losses of 21, 67, 82.5, 86, and 92%.

AUTOMATIC CONTROL OF WEB THICKNESS. Automation 4: 80-81 (Oct. 1957). (3225)

Radiation-type gaging heads were used for successful automatic control of thickness of rubber coatings applied to tire fabric at the Los Angeles plant of Goodyear Tire & Rubber Co. Eliminating hand sampling of a destructive and time-consuming nature, Isotope Products Betameters gave continuous, accurate measurement of thickness and provided electrical signals by which instant, automatic corrective action could be applied to the calendering rolls. Diagram. Photographs.

COMBINED WATERPROOFING AND ROT-INHIBITING FINISHES: COMPLICATIONS AND VARIATIONS. H. Fuhr. Textil-Praxis 12, No. 2: 158-161 (1957). In German. Through BCIRA 37: 259 (1957). (3226)

The main factors causing mildew attack on cellulosic textiles (moisture content, temperature, absence of light, pH value of the impregnated fabric, and fat and wax content of the finishing agent) are discussed and a multiple-bath or heavy impregnating method is described, combining impregnations of the treated material with alumina and copper salts. Reference is also made to one-bath methods (the bath containing waterproofing components and rot-inhibiting chemicals), impregnation with polyisocyanates, and use of copper naphthenate emulsions, cuprammonium solutions, etc.

REMOVAL OF SURFACE FIBERS FROM LAMINATES REINFORCED WITH ORLON ACRYLIC FIBER. E.I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. July 1957. 1 p. Bull. OR-81. Free. (3227)

A recommended solvent technique for removing protruding fibers from laminate surfaces.

DYEING AND PRINTING D 2

DYEING OF COTTON FABRICS WITH INDIGOSOLS IN LIGHT SHADES. V. A. Andreev and T. A. Ivanova. Tekstil. Prom. 16, No. 12: 36-38 (1956). In Russian. Through BCIRA 37: 254 (1957). (3228)

Directions are given for dyeing cotton fabrics with Indigosols, with particular reference to the nitrite method. This method gives level dyeings and, at a concentration of 5 g/l., almost identical results regardless of whether the developing is carried out after drying or whether the fabric is immersed in the acid bath immediately after squeezing. An addition to the dye liquor of 2 parts per 1000 of Nekal (wetting agent) and 10-15 g/l. sodium chloride is recommended.

PROCEEDINGS OF THE PERKIN CENTENNIAL 1856-1956 COMMEMORATING THE DISCOVERY OF ANILINE DYES. Sponsored by the American Association of Textile Chemists and Colorists at the Waldorf-Astoria, New York, N.Y., week of September 10th 1956. 467 p. Available from the AATCC, P.O. Box 28, Lowell, Mass. $10.00. (3229)

DYEABILITY OF ZEFRAN. PART 2. J. E. Loughlin. Dyestuffs 42: 100-102 (Sept. 1957). (3230)

Additional work on dyeing Zefran with vat, direct cotton, sulfur, acid, and naphthol dyes is presented.

INTERFACIAL FILM PHENOMENA IN THE DYEING OF CELLULOSE ACETATE. J. H. Skinkle and E. C. Sherburne. Am. Dyestuff Reptr. 46: 749-760 (Oct. 21, 1957). (3231)

It has been established that an interfacial, liquid film exists in the dyeing of cellulose acetate with disperse dyes, and that it contains an appreciable amount of dye. The interfacial film persists over the entire time of dyeing, but it varies in the amount of its dye content during the dyeing operation. The phenomenon is peculiar to dyeing with acetate dyes and does not occur in the dyeing of viscose rayon with direct cotton dyes or in the dyeing of wool with acid dyes. Diagrams. Graphs. 14 references.

BASIC AND DISPERSE DYES ON ACRYLICS. F. Weber. Skinner's Silk & Rayon Record 31: 1078-1080 (Oct. 1957). (3232)

Recommendations for dyeing acrylic fibers with basic and disperse dyes are given, as well as tables listing the fastness properties of the dyes on the fibers. 6 references.

CATIONIC DYES AND THEIR SPECIAL SIGNIFICANCE FOR COLORING POLYACRYLONITRILE FIBERS. B. C. M. Dorset. Textile Mfr. 83: 518-522 (Oct. 1957). (3233)

The structure and fastness properties of the cationic dyes (e.g. du Pont Sevron and Ciba Deorlene dyes) are discussed, and their application to and stripping from Orlon and Orlon blends are explained in detail.

DYEING OF VISCOSE STAPLE YARN ON CHEESES. W. Festerling. Rayonne et Fibres Synthet. 13, No. 2: 153-160 (1957). In French. Through BCIRA 37: 255 (1957). (3234)

Directions are given for dyeing cheeses of viscose staple yarn with substantive special Immedial, vat and leuco esters of vat dyes.

ABSORPTION CURVES OF DYES. PART 1. METHODS OF DETERMINATION AND REPRESENTATION OF ABSORPTION CURVES AND THEIR PRACTICAL EVALUATION. S. Hafenrichter. Textil-Praxis 12, No. 2: 171-176 (1957). In German. Through BCIRA 37: 257 (1957). (3235)

Methods for determining the dyeing behavior of various dyes are reviewed and graphical representation of the dye take-up by various fabrics (temperature-, time-, and concentration curves) is discussed. 14 references.

DYEING OF VISCOSE RAYONS, DEGRADED BY OXIDATION, WITH DIRECT DYES. C. Daneyrolle. Bull. Inst. Textile France No. 64: 29-44 (Dec. 1956). In French. Through BCIRA 37: 321 (1957). (3236)

Changes in the affinity for direct dyes of viscose rayon in relation to chemical changes caused by oxidation, and the effect of dye characteristics (degree of sulfonation, nature of substituents in the molecule, etc.) on these affinity changes are discussed, with the intention of ascertaining dye formulations giving the best levelness on mixtures of viscose fibers, partly unaltered and partly altered by oxidation. 15 references.

CONTINUOUS DYEING OF COTTON FABRICS WITH SULFUR DYES. V. E. Rostovtsev. Tekstil. Prom. 16, No. 11: 36-37 (1956). In Russian. Through BCIRA 37: 255 (1957). (3237)

Three series of experiments are described, in which optimum concentrations of dye, sodium sulfide, sodium chloride, and sodium hydroxide were determined, the dyeing being carried out at 95° C for 10 seconds. Energetic circulation of the dye liquor through the fabric, repeated squeezing, etc., are pointed out as factors to be taken into account in continuous dyeing with sulfur dyes.

DYEING CELLULOSIC AND NONCELLULOSIC FIBERS WITH VAT DYES. K. J. Bardt (Ciba Co. Ltd). Can. Textile J. 74: 61-65 (Oct. 4, 1957). (3238)

Sodium sulfoxylate formaldehyde, as a reducing agent in vat dyeing, opens new ways for the production of dyeings of better leveling and reproducibility on cotton and viscose. In addition, it permits the dyeing of synthetic fiber blends with vat dyestuffs by simple methods. A high redox potential can be maintained relatively independent of the amount of alkali present in the dyebath. As the pH rises, the affinity of the dyes for cellulosic fibers increases, but it decreases in the case of noncellulosic fibers. Noncellulosic fibers are best dyed at pH 6-7. Table. Graph. 3 references.

HOW TO PAD DYE POLYAMIDE AND POLYESTER FIBERS. A. Würz (Badische Anilin & Soda Fabrik). Textile World 107: 95 (Oct. 1957). (3239)

Low temperature pad dyeing process for polyamide and polyester fibers is based on water-in-oil emulsions and the use of organic solvents combined with steaming and/or heat treating to get color fixation. Vialon (premetallized) colors are used for the polyamide fibers and Celliton (disperse) dyes for the polyester fibers. Reduced processing time and freedom from warp streaks are among the advantages claimed for the system.

ABSORPTION CURVES OF DYES. PART 2. INVESTIGATIONS INTO THE DYEING BEHAVIOR OF VAT DYES. S. Hafenrichter. Textil-Praxis 12, No. 3: 265-268 (1957). In German. Through BCIRA 37: 321 (1957). (3240)

Factors affecting the vat-dye absorption of cotton (temperature, alkalinity, electrolyte concentration of the dye bath, etc.) are discussed and a table is given listing the percentage absorbability of Indanthrene and Anthra dyes (BASF selection) on cotton in dependence of dyeing method, absorption rate, salt addition, dyeing temperature, liquor ratio and dye concentration (in %) to show under which conditions optimum results may be expected.

DYEING YARN BY IMPREGNATION AND REDUCTION. D. B. Grinblat and L. M. Kozlova. Tekstil. Prom. 16, No. 12: 48-49 (1956). In Russian. Through BCIRA 37: 254 (1957). (3241)

The method described consists in impregnating the yarn for 30-45 minutes with the leuco solution of the vat dye at 15-20° C, then raising the temperature of the solution gradually to the optimum for a given dye, and completing the dyeing process at this temperature. The slow rate of dye absorption at low temperature makes it possible to dye cotton and spun rayon yarns on bobbins and beams.

APPLICATION OF SONIC AND ULTRASONIC VIBRATIONS IN FABRIC DYEING. V. M. Fridman. Tekstil. Prom. 16, No. 12: 34-36 (1956). In Russian. Through BCIRA 37: 254 (1957). (3242)

Dyeing experiments on viscose rayon, cotton, wool, silk and Perlon fabrics are reported, showing that application of elastic vibrations in the sonic and ultrasonic frequency range accelerates the dyeing process and promotes dispersion of dyes and pigments.

DEVELOPMENT TRENDS IN CONTINUOUS DYEING WITH VAT DYES. H. Waibel. Textil-Praxis 12, No. 3: 280-283 (1957). In German. Through BCIRA 37: 320 (1957). (3243)

Advantages and disadvantages of continuous dyeing processes (e.g. pad-dyeing, vat-acid dyeing, pad-steam process, hot-oil process, Standfast process, etc.) are discussed, with reference to the equipment required, suitable dyes, and economic aspects.

BEHAVIOR OF DYES IN SOLUTION. A. Schaeffer. Textil-Rundschau 12, No. 2: 59-77 (1957). In German. Through BCIRA 37: 257 (1957). (3244)

The dissolution process of a substance in a solvent is defined and the individual solubilizing groups in dyes (hydroxyl, carboxyl, sulfonic acid, acid-amide and -imide, alkyl sulfonic, polyglycolether, amino, and metal-complex-forming) are discussed. It is shown that the manner of dissociation in dyes forming amphoteric ions depends upon the hydrogen-ion concentration. The behavior of dyes in aqueous solutions (factors affecting colloid formation and the micelle size) and the dispersivity of various groups of dyes are described in detail, with special reference to the mechanism of micelle formation. 29 references.

EFFECT OF PROLONGED STORAGE ON THE STRENGTH OF SULFUR DYED FABRICS. F. I. Sadov. Tekstil. Prom. 16. No. 12: 38-39 (1956). In Russian. Through BCIRA 37: 255 (1957). (3245)

Experiments showed that cotton fabrics dyed with sulfur dyes lose about 6% of their original strength after prolonged storage. This is attributed to the formation of sulfuric acid, which has a hydrolyzing effect on the cellulose and causes its conversion to hydrocellulose.

DYEING THEORY AGAIN. W. L. Lead. (Letter to the editor). J. Soc. Dyers Colourists 73: 464 (Oct. 1957). (3246)

A discussion of the theory involving the spacing of hydrogen-bond-forming groups in dyes which are substantive on cellulose.

PROGRESS IN MECHANICAL SCREEN PRINTING. H. G. Jakob. Rayonne et Fibres Synthet. 13, No. 2: 161-178 (1957). In French. Through BCIRA 37: 257 (1957). (3247)

Screen-printing machines invented or improved in recent years are discussed and examined with regard to their application possibilities.

MECHANICAL PROCESSES D 3

TRIACETATE AND HEAT TREATMENT. T. Jackson (Brit. Celanese Ltd). Man-Made Textiles 34: 67-68 (Oct. 1957). (3248)

The effect of heat setting on fiber properties and various heat treatment methods are discussed.

PLEATING OF CLOTHS CONTAINING TERYLENE. Man-Made Textiles 34: 70 (Oct. 1957). (3249)

Recommended blend proportions for woven and knitted fabrics and for processing conditions for optimum pleating results.

SHEARING OF CLOTH AND VELVET. R. Günther. Spinner u. Weber 75, No. 5: 205-208 (1957). In German. Through BCIRA 37: 229 (1957). (3250)

In this review of the development of cloth shearing from the invention of cloth shears to the shearing machine, special reference is made to the Monforts Universal high-speed shearing machine SR2, the Menschner high-efficiency cloth-cleaning and shearing machine SPS, the Franz Müller velvet-shearing machine CA1n, and the Sistig carpet-shearing machine.

DRYING D 4

WORLD'S FIRST COMMERCIAL FLUID BED. Brit. Tufting Machy. Ltd. Skinner's Silk & Rayon Record 31: 1073 (Oct. 1957). (3251)

This compact, space-saving, drying machine handles cloth up to 60 in. wide. is 15 ft. high, requires only 65 sq. ft. of floor space with its ancillary equipment, and weighs between five and six tons.

TESTING AND MEASUREMENT E

CONDITIONING TEXTILE MATERIALS FOR TESTING. Can. Textile J. 74: 67-68 (Oct. 18. 1957). (3252)

Canadian Specifications Board procedure for conditioning textile materials to moisture equilibrium with the standard atmosphere.

INTRODUCTION TO STATISTICAL INFERENCE. J. C. R. Li. Edwards Bros., Inc., Ann Arbor, Michigan. 1957. 553 p. $7.50. (3253)

This book is essentially a non-mathematical exposition of the theory of statistics written for experimental scientists.

ATLAS OF THE COMMONER PAPER MAKING FIBERS: AN INTRODUCTION TO PAPER MICROSCOPY. F. D. Armitage. The Guildhall Publishing Co., Ltd., 2 Wrentham Ave., London N. W. 10. 1957. 172 p. 63s. (3254)

The book is divided into the following parts: the microscope; the examination of papermaking fibers; qualitative methods for identifying the commoner paper coating materials, adhesives, gums, and sizing agents; speck identification; methods for cutting paper sections; atlas of the commoner paper making fibers; and photomicrography.

FIBER MICROSCOPY: ITS TECHNIQUE AND APPLICATION. J. L. Stoves. London, National Trade Press, 1957. 286 p. 50s. (3255)

The principles of microscopy occupy part 1, which covers the compound microscope, illumination, the polarizing microscope, phase contrast and interference microscopy, photomicrography, ultraviolet microscopy, reflecting microscopes and spectromicrography, the electron microscope, and metal shadow casting in visible microscopy. Part 2 covers the microscopy of fibrous materials and deals with preparation of specimens, animal, vegetable, manufactured and mineral fibers, and microscopic methods of fiber identification. A list of special reagents and stains is given in an appendix.

FIBERS E 1

QUANTITATIVE DETERMINATION OF POLYAMIDE FIBERS IN THE PRESENCE OF WOOL, COTTON, OR RAYON STAPLE. E. Frieser. Z. ges. Textil-Ind. 59, No. 6: 200-202 (1957). In German. Through BCIRA 37: 263 (1957). (3256)

The most suitable methods for separating polyamide fibers from wool are described: the potassium hydroxide method, the formic acid method, and the modified sulfuric acid method. All three were found to be very accurate but, owing to the danger associated with the use of sulfuric acid, the other two methods are preferable. The potassium hydroxide method involves a slight loss in the weight of polyamide fibers (1.4%), and the formic acid method causes the dissolution of about 0.5% wool; the correction factors are 1.01 and 1.0, respectively. For separating polyamide fibers from cotton, of the two methods described (with moderately concentrated hydrochloric acid or with formic acid), the formic acid method is simpler and more accurate. Polyamide/spun rayon blends can be separated quantitatively with greater accuracy either by the formic acid or the modified zincate method.

IDENTIFICATION OF NYLON AND RELATED POLYMERS BY PAPER CHROMATOGRAPHY. M. Clasper, J. Haslam and E. F. Mooney. Analyst 82: 101-107 (Feb. 1957). Through BCIRA 37: 267 (1957). (3257)

After hydrolysis of the sample with acid, the solution is evaporated to dryness and the hydrolysis products thus obtained are dissolved in ethanol and separated by paper chromatography, a mixture of -propanol, ammonia, and water being used as the developing solvent. The various products are identified by observation of the chromatogram under ultra-violet light, and by using ninhydrin and methyl red-borate buffer solutions as spray reagents.

USE OF PAPER CHROMATOGRAPHY IN THE RECOGNITION OF CHEMICAL DAMAGE IN WOOL. V. Köpke and B. Nilssen (Norwegian Textile Res. Inst.). J. Soc. Dyers Colourists 73: 413-416 (Sept. 1957). (3258)

Hydrolysis of wool was carried out by means of acid, alkali, and papain, and the resulting solutions were analyzed by one- and two-dimensional chromatography. Acid hydrolysis appears to be the most convenient method. The method has been used for wool treated with alkali, hydrogen peroxide, and sulfuric acid, and in its present form is sensitive only to severe damage. Tables. 14 references.

DIFFERENTIATION OF JUTE AND JUTE SUBSTITUTE FIBERS. C. G. Jarman and R. H. Kirby. Colon Plant Anim. Prod. 5, No. 4: 281-287 (1955). Through BCIRA 37: 264 (1957). (3259)

Crystalline bodies have been found in the ash of jute and Hibiscus cannabinus L. Cluster crystals are often abundant in the ash of the three commonest jute substitute fibers but are less frequently found in the ash of jute. However, the distinguishing feature of jute is the occurrence of chains of solitary crystals.

RECLAMATION OF FIBERS FROM RAGS. PART 1. IDENTIFICATION OF NON-CARBONIZABLE FIBERS. J. C. Atkinson and J. B. Speakman (Leeds Univ.). J. Soc. Dyers Colourists 73: 417-419 (Sept. 1957). (3260)

Staining tests to distinguish between carbonizable, non-carbonizable, and protein fibers, and between the chief non-carbonizable fibers, were developed. The fibers are treated with a mixture of fluorescent compounds, in the presence of a stripping agent if dyed, and are then examined in ultraviolet light. In a few cases, notably when non-carbonizable fibers are heavily dyed black, stripping should precede staining. Tables.

DIRECT DYE STAINING OF VISCOSE RAYON CROSS SECTIONS AND SOME OF ITS APPLICATIONS. K. Kato (Toyo Rayon Co., Japan). Textile Research J. 27: 803-808 (Oct. 1957). (3261)

A differential staining method for the skin of viscose rayons consists in the dyeing of fiber cross sections by a blue direct dye, Azine Brilliant Blue, followed by washing through the usual alcohol series. The technique has been applied to a wider range of cellulosic fibers. Cotton and BX fiber (a French viscose rayon) are shown to be similar to the core, while mercerized cotton, Shintoramomen (a Japanese viscose rayon staple), and Fortisan are found to be like the skin in their respective staining properties. Photomicrographs. 15 references.

YARNS E 2

MEASURING THE NEPPINESS OF CARD WEB. Shirley Developments Ltd. Textile Wkly. 57: 932, 934 (Oct. 4, 1957). (3262)

The new type "Shirley" nep counting templates are made from a durable, lightweight laminated plastic so that they are more convenient to handle and considerably cheaper than the metal type they replace. The use of the Shirley technique for measuring the effect of card settings, stripping cycle variations, flat grinding cycle, and mixing procedures on nep counts is briefly described.

PROCESS CONTROL BY DEMONSTRATION: ZELLWEGER SYSTEM. Textile Wkly. 57: 1008-1013 (Oct. 11, 1957). (3263)

A movable stand for the Uster range of evenness tester equipment (evenness tester, spectrograph, varimeter, and ancillary devices) incorporates a special pneumatic suction device, eliminating any possibility of the yarn running round the rollers when the tester is used at high speeds. Features of these instruments, as well as of the Zellweger system for demonstrating them, are described. Modifications to the Uster warp tying machines are also briefly mentioned.

CONTINUOUS TWIST IRREGULARITY TESTER. M. Uno and A. Shiomi (Kyoto Tech. Univ., Japan). Textile Research J. 27: 818-824 (Oct. 1957). (3264)

Three types of continuous twist irregularity testers were constructed which measure the variability of twist along a specified length of yarn utilizing a continuous untwist-twist principle. These testers can also be used to detect periodicities. Diagrams. Graphs. 3 references.

ADHESION AND SLIPPAGE OF FIBERS. H. Stein. Rayonne et Fibres Synthet. 13. No. 2: 187-196 (1957). In French. Through BCIRA 37: 261 (1957). (3265)

Factors affecting the slip and stick properties of slivers and roving are briefly discussed and instruments for measuring their mechanical properties, e.g. Stehastat and Statigraph (for determining the tensile strength), Reiwigraph (abrasion resistance), Dynagraph (elongation), are discussed and illustrated.

FABRICS E 3

METHODS OF TEST FOR TEXTILES. PART 19. SHRINK TEST FOR WOVEN FABRICS. J. Onderstal. Enka Breda Rayon Rev. 11: 125-128 (Sept. 1957). (3266)

The method and equipment adopted by the Central Textile Laboratory of N.V. Research of the A.K.U., which has devoted special attention to the press and the stencils used for marking, are described. This method is essentially Netherlands draft standard V2120. Photographs. Table.

CONTROLLED THERMAL-SHOCK TESTING OF GLASS-CLOTH LAMINATES. J. H. Beno, A. M. Dowell and E. F. Smith (Hughes Aircraft Co.). ASTM Bull. No. 225: 25-28 (Oct. 1957). (3267)

A method for controlled thermal shock testing, that is capable of simulating aerodynamic heating, has been developed which makes use of a molten-metal bath as the heating medium. This method is preferred over the other methods tried because of its convenience and controllability. Graphs. Tables. Photographs.

METHOD OF TEST FOR THE DETERMINATION OF THE FLUIDITY OF LINEN MATERIALS IN CUPRAMMONIUM HYDROXIDE SOLUTION. J. Textile Inst. 48: P675-P679 (Sept. 1957). (3268)

Tentative textile standard no. 45 based on the method developed by the Linen Industry Research Association. Diagrams.

PILL TESTING. N. M. Mims (Imperial Chemical Industries Ltd). (Letter to the editor). J. Textile Inst. 48: T375-376 (Sept. 1957). (3269)

It is pointed out that for pill testing to be of any value in predicting the performance of garments the test used must correlate with wear for each type of fabric which is to be evaluated. A tumbler test is described which has given reliable results for wool/Terylene. 2 references.

AUTOMATIC IGNITION AND TIMING OF THE FLAME IN THE VERTICAL FIRE RESISTANCE TEST. J. D. Tallant (Southern Reg. Res. Lab.). (Letter to the editor). Textile Research J. 27: 825-826 (Oct. 1957). (3270)

HEAT TRANSMISSION OF FABRICS IN WIND. C. D. Niven. Textile Research J. 27: 808-811 (Oct. 1957). (3271)

Two samples of overcoating material were tested by the hot plate method for heat transmission in wind when an air space under the material was provided. When a sample has a high permeability to air and does not lie close to the hot plate, there is a very marked difference between the results obtained with a wind blowing parallel to the surface and those with the wind striking the surface at 45°. The work also proves that the thermal insulation afforded by a fabric or combination of fabrics in wind depends on what is underneath the sample and suggests that some purely arbitrary test procedure may be desirable. Diagram. Graphs. 8 references.

INSTRUMENT FOR THE MEASUREMENT OF CARPET THICKNESS DURING WEAR. S. Dilworth (Wool Industries Res. Assoc.). (Letter to the editor). J. Textile Inst. 48: T377-T378 (Sept. 1957). (3272)

PILLING OF WOOL/TERYLENE BLENDED FABRICS. I. U. Nilsen, W. J. Onions and C. S. Whewell (Leeds Univ.). (Letter to the editor). J. Textile Inst. 48: T374 (Sept. 1957). (3273)

Results are presented which show that on a modified Martindale abrasion tester the formation of pills reaches a maximum after which the pills wear off and are not replaced. The problem of what is the most suitable end-point for the test in order to predict the probable behavior of the fabrics in service is posed.

PREDICTION OF PARTICLE SIZE RETENTION. J. F. Zievers, R. W. Crain and W. L. Werchun (Industrial Filter & Pump Mfg. Co.). Chem. Eng. Progr. 53: 493-496 (Oct. 1957). (3274)

An attempt to develop a fast, commercially accurate method of determining micron retention of paper, felts, and nonwoven fabrics is described. Freely available and easily obtainable data were investigated. Diagram. Graphs. Nomograph. 4 references.

OTHER E 4

DETERMINATION OF SULFUR AND ITS COMPOUNDS IN RAYON. M. J. Maurice. Textile Research J. 27: 774-782 (Oct. 1957). (3275)

Methods for the determination of sulfides, sulfites, xanthates, sulfates, and elemental sulfur are described. Tables. Diagrams. 9 references.

TEXTOMETER ELECTRIC-TYPE MOISTURE INDICATOR. H. Mahlo. Textile Merc. 137: 568 (Oct. 4, 1957). (3276)

The measuring principle of the Textometer is based on the fact that the electrical conductivity of textile fibers varies exponentially with their moisture content. The value measured can be read directly in moisture percentages on the calibrated interchangeable scale. A special scale, easily fitted in, is used for each kind of material.

ERRORS IN THE ASSESSMENT OF COLOR FASTNESS. U. Bülow and S. Horrdin. J. Soc. Dyers Colourists 73: 459-464 (Oct. 1957). (3277)

The different sources of variation in assessing fastness, especially light fastness, are discussed. By a variance component analysis the total variance and its components--the process variation, the testing variation, and the assessment variation--have been estimated for eight different dyeings on a cotton fabric. The assessment variation is found to be considerable, depending both on differences with one and the same observer (time factor) and on differences between different observers (observer factor). The possibility of obtaining a truer estimate of fastness is briefly discussed. Graphs. Tables. 5 references.

QUANTITATIVE INDIGO DETERMINATION ON WOOL AND ON COTTON. J. Khachoyan. Teintex 22, No. 2: 93-102 (1957). In French. Through BCIRA 37: 256 (1957). (3278)

Methods for determining indigo dye on wool and cotton (by (a) colorimetric measurement of the dyeings themselves, (b) dissolution of the fiber and determination of the dye, and (c) extraction of the indigo dye by solvents) are reviewed and a method is described which is based on the use of *o*-chlorophenol as extraction solvent. The quantity of the dye fixed on wool or cotton is determined per 0.1 g of the material. The method can be also applied in the presence of acid, basic, or chromium dyes.

INDUSTRIAL ENGINEERING F

BASIC LIMITATIONS OF OPERATIONS RESEARCH IN INDUSTRY. G. S. Odiorne. J. Industrial Eng. 8: 266-268 (Sept.-Oct. 1957). (3279)

It is contended that operations research is an ingenious and highly useful tool to supplement and strengthen the techniques of engineering, marketing, accounting, and other specialized technical areas, but that there are limitations upon operations research; and it is casuistry to impute into OR sufficient capacity to call it a way of managing.

MACHINE INTERFERENCE. P. Naor. J. Roy. Stat. Soc. B 18, No. 2: 280-287 (1956). Through BCIRA 37: 273 (1957). (3280)

The machine interference problem is considered when several repair men have charge of a set of machines. An explicit probability distribution function, describing the various states of this system, is derived and formulae evaluating diminished productivity and related quantities are given in terms of tabulated Poisson functions.

RUNNING AN OPERATIONS RESEARCH DEPARTMENT IN AN INDUSTRIAL ORGANIZATION. A. W. Swan (Courtaulds Ltd). J. Industrial Eng. 8: 269-274 (Sept.-Oct. 1957). (3281)

General discussion, using yarn preparation and weaving examples.

INTEGRATED COST REDUCTION. Factory Management and Maintenance 115: 83-126 (Aug. 1957). (3282)

A series of articles with numerous examples of plant cost-cutting ideas and applications that can be organized to work on a continuing basis.

OFFICE WORK AND AUTOMATION. H. S. Levin. N.Y., Wiley, 1956. 203 p. $4.50. (3283)

Provides a general background in some of the recent developments in data processing equipment and scientific management techniques.

WORK STUDY AND THE MANAGER. R. Tattersall. Textile Wkly. 57: 584-588 (Aug. 30, 1957). (3284)

General aspects of work study and managerial and supervisory interrelations.

RATIO-DELAY STUDY TO CONTROL LABOR COSTS. H. Brownstein. Textile World 107: 102-103, 194 (Oct. 1957). (3285)

Ratio-delay studies rapidly show whether such items as waiting time, thread breaks, and fixing of repairs are excessive or satisfactory. Results of the studies can be used to improve cost-control programs. A ratio-delay study done in a sewing plant is described as an example of how the system operates.

HOW TO IMPROVE MILL COSTING. J. Drury. Modern Textiles Mag. 38: 34, 54-56 (Oct. 1957). (3286)

The major errors and omissions of various cost systems are analyzed, and it is pointed out that any successful system must be free from complexity, flexible, up-to-date, and subject to accurate testing.

PRACTICAL COSTING FOR EFFICIENCY. G. H. Tarrant (Brit. Celanese Ltd). Textile Merc. 137: 68-71 (July 12, 1957); 107-110 (July 19, 1957). (3287)

Basic efficiency controls are described rather than accounting procedures. The subject is dealt with from the point of view of labor efficiency and incentives, material usage, machine utilization, and overheads and services, concluding with views on the accountant's contribution to increased efficiency. Tables.

INFORMATION: THE NEEDS OF MANAGEMENT. H. L. Bingham (Courtaulds Ltd). Textile Merc. 137: 314-319 (Aug. 23, 1957); 359-361 (Aug. 30, 1957). (3288)

Discusses the costing information needed by all levels of management in various types of concerns. The author suggests that much of the effort going into detailed routine reporting, especially to the higher ranks of management, would be more valuable if diverted to the study of specific problems.

MACHINERY AND MAINTENANCE F 1

MODERN TEXTILE MOTORS. J. B. Wren (Westinghouse Elec. Corp.). Textile Bull. 83: 107-110 (Oct. 1957). (3289)

This paper deals with the use of a.c. motors in the textile industry with emphasis on the mechanical features required in many applications. Evolution of the present-day loom motor and the lint-free fan-cooled motor is also described.

AKULON IN THE TEXTILE INDUSTRY. PART 4. J. Siebrand. Enka Breda Rayon Rev. 11: 131-140 (Sept. 1957). (3290)

The effects of injection molding conditions on the hardness, impact strength, modulus of elasticity, and the dimensions of Akulon products are shown. The use of Akulon parts in textile machinery is described and illustrated. Photographs.

PROPER CARE AND HANDLING OF LUBRICANTS. E. W. Fair. Can. Textile J. 74: 73-74 (Oct. 18, 1957). (3291)

MATERIALS HANDLING. R. F. Challis (Yale & Towne Mfg. Co.). Textile Wkly. 57: 883-888 (Sept. 27, 1957). (3292)

The importance of efficient handling of materials is emphasized and a scheme for analyzing the efficiency of an existing system and improving it is outlined.

MATERIALS HANDLING. Textile Age 21: 13-33 (Oct. 1957). (3293)

Some popular systems of materials handling and job-planned accessories being used successfully by specific textile companies to lower their operating costs are described and illustrated.

TRANSDUCTORS AND SPEED CONTROL SYSTEMS. Textile Mfr. 83: 508-510 (Oct. 1957). (3294)

The transductor, or saturable reactor, is an electromagnetic device which has been adapted to control the supply of electrical power to a load. Its application for variable speed control is explained. Diagrams.

WASTE DISPOSAL F 2

DISPOSAL OF INDUSTRIAL WASTE MATERIALS. Society of Chemical Industry, 14-16 Belgrave Square, London SW 1. 1957. 157 p. £2 10s. (3295)

Papers read at the conference at Sheffield University, 17th-19th April, 1956, with the discussions that followed. Includes: "The disposal of industrial waste material: textiles and paper." Part 1. "The disposal of textile fibrous wastes," by A. J. Turner, p. 45-50; Part 2. "The disposal of textile and paper liquid wastes," by A. J. Howard, p. 50-54.

GOOD HOUSEKEEPING IS BEST SOLUTION TO STREAM POLLUTION PROBLEM. R. E. McKinney. Am. Textile Reptr. 71: 71-74 (Oct. 17, 1957). (3296)

With greater emphasis on water conservation and water pollution, the textile industry is faced with an ever-increasing waste water problem. To aid the plant managers in evaluating the work of plant personnel or consultants ten steps in evaluating and solving the waste water problem are outlined.

QUALITY CONTROL F 3

TEXTILE QUALITY CONTROL PAPERS. Vol. 4, 1957. American Society for Quality Control, Room 6197 Plankinton Bldg., 161 West Wisconsin Ave., Milwaukee 3, Wis. 1957. $5.00. (3297)

"Integrated quality control--from weaving to sewing," by F. Golden, p. 1-5; "Cotton merchandising changes with consumer demands," by E. E. Berkley, p. 6-13; "Managing the quality control function," by R. G. Mitchell, p. 14-18; "Variations flow analysis," by N. L. Enrick, p. 19-22, "Application of statistics in a spinning laboratory," by C. B. Landstreet, p. 23-27; "Statistical instrumentation of a spinning laboratory," by P. R. Ewald, p. 28-33; "How to sample profitably," by D. A. Gardiner, p. 34-41; "How analysis of variance works," by T. R. Bainbridge, p. 42-53; "A designed experiment to evaluate two yarn lubricants," by H. M. Hill and D. Wheeler, p. 54-56; "Practical application of operations research," by R. W. Lindsay, p. 57-63; "Modern advances in the use of the range," by R. S. Bingham, Jr., p. 64-72; "Quality control of fabrics and problems involved in manufacturing cloth," by K. V. Chase, p. 73-76; "Types of defects found in cotton piece goods and the inspection system used at the Millville Mfg. Co.," by L. B. Cook, p. 77-82; "Common defects found in fabrics manufactured from man-made fibers," by J. P. Acquaviva, p. 83-84; "Recommended standards of measurement to be applied in quality fabric control," by R. A. Jenkins and E. F. Lowe, p. 85-86; "The Enro Shirt Company, Inc. quality control of fabrics and problems involved in manufacturing garments," by G. W. Edwards, p. 87-91, "Types of defects and their control in shirt manufactured of blended fabrics," by M. R. Woodard, p. 92-95; "Quality problems of automotive fabrics from the producer's point of view," by E. C. Atwell, p. 96-99; "Quality requirements of automotive fabrics," by W. R. Strother, p. 100-105.

PHILADELPHIA QM STATISTICAL QUALITY CONTROL PROGRAM. Daily News Record No. 195: 24 (Oct. 7, 1957). (3298)

Application of statistical quality control in reducing seconds and rejects in cutting and sewing applications.

CONTROL OF TEXTILE QUALITY IN RELATION TO CONSUMER REQUIREMENTS. H. W. Best-Gordon and H. A. Thomas. J. Textile Inst. 48: P648-P673 (Sept. 1957). (3299)

Part 1 of this paper surveys and classifies a number of quality control schemes in various countries, indicating the general principles involved, and in particular the method of operation of the Courtaulds' Tested-Quality Plan. Part 2 deals in some detail with technical aspects of quality control. 9 references.

OTHER F 4

RECLAMATION OF FIBERS FROM RAGS. PART 2. ISOLATION OF WOOL FROM MIXTURES OF WOOL AND TERYLENE. J. C. Atkinson and J. B. Speakman. J. Soc. Dyers Colourists 73: 419-423 (Sept. 1957). (3300)

Wool may be recovered from mixtures of Terylene and wool by treatment with a 2% solution of hydrazine in butanol at 100° C for 60 min. Terylene is completely destroyed but the wool suffers only slight damage. Tables. Graphs. 4 references.

SCIENCES G

CHEMISTRY G 1

FIBER CRYSTALLINITY DURING ACID HYDROLYSIS. E. H. Daruwalla and P. Subramaniam (Univ. of Bombay). (Letter to the editor). Textile Research J. 27: 827-829 (Oct. 1957). (3301)

Changes in the crystalline fraction of different cellulosic fibers when subjected to identical conditions of mild acid action were studied. Tables. 12 references.

STUDIES IN CELLULOSE CHEMISTRY. PART 1. CERTAIN OBSERVATIONS ON THE FORMATION OF CELLULOSE NITRATE FROM CELLULOSE. T. S. A. Padmanabhan, S. K. Ranganathan, T. N. Rawal and L. R. Sud. J. Sci. and Ind. Research (India) 16B: 414-417 (Sept. 1957). (3302)

The various factors contributing to a high degree of nitration and solubility of cellulose nitrate have been investigated. An attempt has been made to ascertain whether degradation of cellulose takes place during nitration. Tables. 16 references.

METHYLATION OF CELLULOSE XANTHATE. B. J. Barrett and C. H. Lindsley (American Enka Corp.). Textile Research J. 27: 767-773 (Oct. 1957). (3303)

Since the distribution of xanthate groups along cellulose chains in commercial viscose solutions probably affects the processing qualities of the viscose and the physical properties of the spun yarn, it is important to know what that distribution is. Xanthate groups are too unstable to permit direct determination of their location and attempts have been made to fix their location by quantitative replacement with methoxyl groups followed by hydrolysis to produce methylglucoses. In the present work chromatographic methods were used to separate and identify the products of hydrolysis. However, it was found that about 20% of the xanthate groups are not replaced but are converted to the S-methyl ester and are lost during hydrolysis. 15 references.

WITH GLYCERINE FROM FIBER TO FABRIC. PART 1. E. A. Parolla and C. Z. Draves. Am. Dyestuff Reptr. 46: 761-769 (Oct. 21, 1957). (3304)

This literature survey includes information on supply and demand, properties, and applications of glycerine as a textile conditioning agent and in special finishes. 73 references.

NEW APPROACH TO THE DETERMINATION OF THE ACCESSIBILITY OF WOOL TO SORBATES. J. H. Bradbury (Wool Textile Res. Lab.). (Letter to the editor). Textile Research J. 27: 829-831 (Oct. 1957). (3305)

ACTION OF CHLOROUS ACID ON HYDROCELLULOSES. G. F. Davidson and T. P. Nevell (Shirley Inst.). J. Textile Inst. 48: T356-T361 (Sept. 1957). (3306)

An attempt was made to obtain the aldehyde content of hydrocelluloses by oxidation of the aldehyde groups to carboxyl groups. Treatment with acidified chlorite solutions diminishes the reducing power of hydrocelluloses and increases their carboxyl content, but it was not possible to eliminate the reducing power completely by such treatment. Tables. Graphs. 7 references.

DETERMINATION OF 7-OXOCHOLESTEROL IN WOOL WAX. A. H. Milburn and E. V. Truter (Leeds Univ.). J. Appl. Chem. 7: 491-497 (Sept. 1957). (3307)

A method for quantitative determination of 7-oxocholesterol is described, and used for examining a number of wool waxes from different sources. The amount of free 7-oxocholesterol varies between 0.7 and 2.8%, and in addition 0.2-3.9% occurs in the form of esters. Cholestenone is present only in traces. It is shown that at least part of the 7-oxocholesterol arises by autoxidation. Tables. Graphs. 11 references.

SUPERCONTRACTION OF WOOL IN SOLUTIONS OF LITHIUM SALTS. J. Griffith and A. E. Alexander. Textile Research J. 27: 755-767 (Oct. 1957). (3308)

Supercontraction of various types of wool, modified wool, and other keratins was studied in concentrated solutions of lithium salts, particularly bromide. The purity of the lithium bromide was found to be of considerable importance. With bromine concentrations in the range 10^{-4}-10^{-5} M, marked differences between clean and detergent-treated wools were observed. Removal of the bromine by means of thiosulfate enabled quantitative measurements to be made of such variables as concentration of lithium bromide, time and temperature of treatment, etc. Tables. Graphs. Photomicrographs. 34 references.

SOIL RETENTION BY TEXTILE MATERIALS. A. J. Hall. Textile Recorder 75: 64-66 (Oct. 1957). (3309)

The article presents some of the more important results on the comparative soiling tendencies of various fibers as reported by Weatherburn and Bayley. See TTD 12: 356 (1955). Graphs.

EFFECT OF BUILDERS ON THE SORPTION OF SODIUM MYRISTYL SULFATE ON COTTON AND ON CARBON. G. S. Perry, A. S. Weatherburn and C. H. Bayley (Nat. Res. Council, Canada). J. Am. Oil Chemists Soc. 34: 493-495 (Oct. 1957). (3310)

In the case of sorption on cotton there was an approximately linear increase in sorption of the detergent with increasing builder concentration. In the case of sorption on carbon the addition of builder again led to an increase in sorption, but in this case the sorption was an exponential function of the builder concentration. Tables. Graphs. 15 references.

ADSORPTION AND DESORPTION OF SOOT ON COTTON IN AQUEOUS MEDIUM. W. Strauss. Kolloid Z. 150, No. 2: 134-136 (1957). In German. Through BCIRA 37: 265 (1957). (3311)

The equation, developed empirically to serve as a basis for studying the kinetics of pigment-adsorption and -desorption processes during washing, makes it possible to calculate, from reflection measurements, approximate values of soot or ferric oxide concentration on cotton in g/sq.cm. The Kubelka and Munk equation, used previously for the interpretation of pigment-soil removal, is valid only in the low concentration range, greater deviations occurring at higher concentration.

EVALUATION OF SOIL REMOVAL FROM COTTON FABRICS. W. J. Diamond and H. Levin (Whirlpool Corp.). Textile Research J. 27: 787-795 (Oct. 1957). (3312)

Certain characteristics of a soil-fiber complex are critically important to valid comparison of the relative soil removal abilities of washing machines and detergents. These characteristics are obtained by a method of direct precipitation of zirconyl phosphate soil in cotton fabric. Soiled test cloths thus prepared permit evaluation of soil removal with a high degree of precision and reproducibility. Photographs. Tables. Graphs. 8 references.

EFFECT ON WOOL OF BOILING IN AQUEOUS SOLUTIONS. PART 3. ACIDS AND ACIDIC SALT SOLUTIONS. R. V. Peryman (Wool Industries Res. Assoc.). J. Soc. Dyers Colourists 73: 455-459 (Oct. 1957). (3313)

Worsted yarn of 64s quality is boiled at controlled pH values and for times simulating commercial dyeing in a package-dyeing machine using sulfuric, phosphoric, formic, acetic, oxalic, and hydrochloric acids with and without salts. Changes produced in the wool, as measured by alkali solubility or alternatively by urea-bisulfite solubility, are related to the pH value of the treatment solution at 100° C. Sulfuric acid is found to be the most active of the acids but, in terms of the pH value of the cooled solution, sodium sulfate-sulfuric acid solutions are exceptional in having an "apparent" protective action. Practical implications are discussed. Graph. Table. 11 references.

PHYSICS G 2

TEXTILE USERS OF NUCLEAR RADIATION. AATCC. Committee on Nuclear Radiation. Am. Dyestuff Reptr. 46: P777-P778, P780 (Oct. 21, 1957). (3314)

A list of firms using nuclear radiation for solving textile problems has been prepared from the catalogs of licensees published by the Atomic Energy Commission. Data is given on the specific radioisotope employed and for what purposes the permit was granted. 6 references.

MISCELLANY H

IMPRESSIONS FROM THE BASLE FAIR. H. Lanigan. Textile Wkly. 57: 1351-1352, 1362 (May 10, 1957); 1427 (May 17, 1957). (3315)

THE CONSUMER IS ALWAYS RIGHT. Nylon Outlook 1: 13-17 (Autumn 1957). (3316)

The purpose and methods of consumer research are explained, and the existence of a wide range of topics upon which such research can obtain useful data is suggested.

INFORMATIONAL SOURCES IN THE ADOPTION PROCESS OF NEW FABRICS. G. M. Beal and E. M. Rogers (Iowa State Coll.). J. Home Econ. 49: 630-634 (Oct. 1957). (3317)

The concepts and tools of analysis now being used by rural sociologists in the study of farm practices are applied to the study of the homemaker adoption of fabrics made of nylon, Dacron, and Orlon. The main data were related to the sources of information used by farm women. Sources of information were categorized as mass media, informal, agency, commercial, and self. Tables. Graph.

STORY OF LACE AND EMBROIDERY AND HANDKERCHIEFS. D. E. Schwab. N.Y., Fairchild Pubns. Inc., 1957. 80 p. $4.50. (3318)

The history of lace and embroidery, a glossary of lace terms, the history of handkerchiefs, and a glossary of handkerchief terms. 48 photographs.

ECONOMICS OF MAN-MADE FIBERS. D. C. Hague. London, Gerald Duckworth & Co. Ltd., 1957. 315 p. 30s. (3319)

This book is an economic history of the man-made fibers industry in the United Kingdom. Part 1 describes the technical and economic problems which were involved in organizing the large-scale manufacture of man-made fibers, particularly rayon, nylon and Terylene, and explains how they were overcome; and Part 2 does the same for the industries where these fibers are used as raw materials and worked up into finished goods. The final chapter is a critical analysis of the factors which encourage or hinder innovation in an industry.

COTTON INDUSTRY IN BRITAIN. R. Robson. London, Macmillan, 1957. 364 p. 60s. (3320)

This book outlines the development of the cotton industry in the United Kingdom from the earliest days to the present, with special reference to the events of the last forty years. The changes in the competitive position of the industry during this period are analyzed and an account is given of the efforts made to meet these changed conditions by collective regulation and by Government intervention. Comprehensive statistics relating to the industry and to the relevant international background are provided.

TEXTILES IN THE FISHING INDUSTRY. Textiles in Industry 2: 87 (Sept./Oct. 1957). (3321)

Textile exhibits at the International Fisheries Exhibition at Lowestoft, October 21 to 26, are summarized.

PATENT CHECKLIST

U.S. patents may be obtained from the U.S. Patent Office, Washington, 25, D.C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

YARN PRODUCTION B

PRODUCTION OF A BLENDED SLIVER OF BROKEN FILAMENTS AND DISCONTINUOUS FIBERS. Société de Constructions Mechaniques de Stains. BP 773 951, May 1, 1957. Through BCIRA 37: 315 (1957). (3322)

A top of discontinuous fibers (e.g. wool) is subjected to a drawing process, a tow of continuous filaments (rayon) is drawn and broken, and the two are combined in a common sliver.

FALSE-TWIST CRIMPING APPARATUS. L. Trapido, T. De Vito and S. Giarraputo (to Kahn & Feldman, Inc.). USP 2 807 130, Sept. 24, 1957. (3323)

TEXTILE LUBRICATING OIL. D. H. McLean and P. J. Way (to Esso Research & Engineering Co.). USP 2 810 694, Oct. 22, 1957. (3324)

Emulsifiable textile oil composed of a mineral base containing a small proportion of two nonionic type detergents (e.g. polyoxyalkylene derivatives of an alkylated phenol and an aliphatic acid or alcohol).

OPENING, PICKING, FIBER PREPARATION B 1

PREPARATION OF BLENDED FIBROUS MATERIALS. W. A. Hunter and F. Singleton (to T.M.M. (Research) Ltd). BP 772 613, Apr. 17, 1957. Through BCIRA 37: 315 (1957). (3325)

Each ingredient is separately opened and conveyed at a metered rate to a common conveyor.

FIBER CLEANING MACHINE. G. J. Kyame and W. A. Latour. USP 2 810 163, Oct. 22, 1957. (3326)

Recovery system for recovering waste fiber from conventional opening machine.

CARDING AND COMBING B 2

CARD CLOTHING. E. E. Fourniér. BP 772 139, Apr. 10, 1957. Through BCIRA 37: 282 (1957). (3327)

The wire teeth are so constructed and located as to be self-setting in the event of being pushed back partially out of the foundation.

CARDING ENGINE. Howa Kogyo KK. BP 752 929, July 18, 1956. Through BCIRA 37: 282 (1957). (3328)

To improve the opening action of the mechanism leading to the main card cylinder, a second taker-in roller (B) is provided between the normal first roller (A) and the cylinder (C) and a stripping roller is arranged close to the taker-in rollers so that part of the fiber on taker-in (A) is transferred to (B) and then to (C) and the rest is worked by the stripping roller and (B) in succession.

TREATMENT OF SYNTHETIC FIBERS FOR CARDING. N.V. Onderzoekingsinstituut Research. BP 772 629, Apr. 17, 1957. Through BCIRA 37: 315 (1957). (3329)

Polyamide fibers are treated first with polymers containing a number of carboxylic or sulfonic groups (e.g. polymethacrylic acid), and then with an organic monomeric cation-active substance (e.g. quaternary ammonium salts). The coefficient of friction is decreased, the fibers are stiffened, and the accumulation of electrostatic charges is inhibited.

MEANS FOR SUPPORTING AND MOVING THE BALL ROLL OF A SLIVER BALLING HEAD OF SINGLE OR DOUBLE PIN-FIELD GILL BOXES FOR COMBING AND DRAWING OF TEXTILE FIBERS. Tematex Srl. BP 772 819, Apr. 17, 1957. Through BCIRA 37: 315 (1957). (3330)

DRIVES FOR THE NIPPERS OF COMBING MACHINES. Deutscher Spinnereimaschinenbau Ingolstadt. BP 773 157, Apr. 24, 1957. Through BCIRA 37: 315 (1957). (3331)

The nippers of rectilinear combing machines are driven by means of a linkage without a cam.

ROLLER CARDING MACHINES. C. O. Müllenschläder. BP 773 211, Apr. 24, 1957. Through BCIRA 37: 315 (1957). (3332)

The feed mechanism, worker and clearer rollers, and doffer are disposed in a circle round the main cylinder.

DRAWING AND ROVING B 3

PHOTOELECTRIC STOP MOTION FOR ROVING FRAMES. R. T. Craxton (to Brit. Thomson-Houston Co. Ltd). BP 771 062, Mar. 27, 1957. Through BCIRA 37: 282 (1957). (3333)

DRAWING DEVICES EMPLOYING AN UPPER BELT. H. Weller and J. Pfenningsberg (to J. Pfenningsberg & Co.). BP 772 812, Apr. 17, 1957. Through BCIRA 37: 315 (1957). (3334)

The apron-guiding member is subject to the action of two yielding, pressure-applying means that act in different directions.

SLIVER FAILURE DETECTION DEVICE. G. E. Scott (to Douglas Fraser & Sons Ltd). BP 773 219, Apr. 24, 1957. Through BCIRA 37: 315 (1957). (3335)

An electrical stop motion for drawframes is described.

DRIVE SHAFT AND SHEAR COUPLING FOR RECTILINEAR GILL BOX. J. R. Longstreet (to Warner & Swasey Co.). USP 2 807 052, Sept. 24, 1957. (3336)

TOP ROLL WEIGHTING. J. F. King, Jr. (to Bahnson Co.). USP 2 807 053, Sept. 24, 1957. (3337)

Arrangement for locating and guiding top roll weights to maintain vertical alignment with respect to the weight levers for uniform pressure.

SPINNING, WINDING, TWISTING B 4

AUTOMATICALLY ORIENTATING RING TRAVELERS. W. Reiners and S. Fürst. BP 753 043, July 18, 1956. Through BCIRA 37: 283 (1957). (3338)

Loose travelers are caused to fall on to a threading pin and those that do not take up the correct position are automatically removed from the pin. Various modifications are claimed. In one, the travelers fall out of a drum on to an inclined plane, electromagnetically vibrated, and slide down to the pin. Near the point of the pin is a rotating finger that can pass through the open end of a traveler if correctly mounted on the pin but otherwise lift it off and drop it on an endless belt that carries it back to the drum.

STRETCHING OF TWISTED YARNS. Barmer Maschinenfabrik AG. BP 753 232, July 18, 1956. Through BCIRA 37: 284 (1957). (3339)

In a method of stretching twisting yarn on double-twist twisting frames (for the production of knop, tire, and other cabled yarns), the yarn during its travel between the balloon and the drawing-off apparatus is passed over guide pins (of synthetic sapphire) one of which is adjustable on an arc about the other pin.

DRAFTING RAYON STAPLE. J. Locke (to Brit. Rayon Res. Assoc.). BP 753 534, July 25, 1956. Through BCIRA 37: 282 (1957). (3340)

A drafting device for rayon staple fiber has four bottom rollers, two weighted upper rollers for rollers 1 and 4, respectively, and a large weighted roller bearing on both rollers 2 and 3. The spacing from roller to roller is not greater than the staple length of the fiber. The bottom rollers are positively driven at such speeds that drafting occurs between rollers 1-2 and 3-4 but not between 2 and 3. Suitable roller diameters, spacings and cover materials for various staples are recommended.

TWISTING AND DOUBLING MACHINES. E. P. R. Scragg (to Ernest Scragg & Sons Ltd). BP 753 354, July 25, 1956. Through BCIRA 37: 284 (1957). (3341)

A double-twist uptwister spindle is fitted above the bobbin and beneath the take-off flyer with a supply of wetting medium, and also with means for wetting the yarn before the first twist is imparted.

SPINDLES FOR YARN SPINNING AND TWISTING. A. W. Edwards (to Ferranti Ltd). BP 753 539, July 25, 1956. Through BCIRA 37: 283 (1957). (3342)

The invention relates to spindles in which the cop skewer is carried by and revolves with an outer casing that has a slot through which the yarn is admitted. The outer bearing member is attached to a ring rail but the inner bearing is free to revolve independently of the spindle except for an abutment detachably mounted on the inner bearing and projecting into the slot. The abutment is provided with a yarn guide and the inner bearing is driven round by the outer casing. The two bearings may be the inner and outer races of a ball bearing.

SPINDLE DRIVE FOR YARN DOUBLING, TWISTING, AND LIKE MACHINES. F. Pilkington (to Arundel, Coulthard & Co. Ltd). BP 753 585, July 25, 1956. Through BCIRA 37: 284 (1957). (3343)

The invention relates to spindles that are driven through contact with a belt and seeks to overcome a common tendency of such spindles to bounce on and off the belt.

DEVICE FOR HIGH TWISTING OF THREADS. Hollandsche Kunstzijde Industrie NV. BP 771 029, Mar. 27, 1957. Through BCIRA 37: 284 (1957). (3344)

A thread guide with a cylindrical channel is described. Running back of twist in the production of crepe yarns may be avoided.

BUILDING MOTIONS FOR SPINNING, DOUBLING, TWISTING MACHINES. H. Whittaker (to T. M. M. (Research) Ltd). BP 771 250, Mar. 27, 1957. Through BCIRA 37: 283 (1957). (3345)

A secondary lever that can have its effective length varied enables the point of reversal of the traverse to be varied, preventing lag on reversal.

FLYER FOR TEXTILE MACHINERY. J. Bradley and J. Woods (to John Bright & Bros. Ltd). BP 771 898, Apr. 3, 1957. Through BCIRA 37: 282 (1957). (3346)

The flyer arm is of spring steel wire and is looped; the bush is of nylon. Improved durability is claimed.

BROKEN FILAMENT ARTIFICIAL YARNS. Alfredo Nai. BP 771 905, Apr. 3, 1957. Through BCIRA 37: 284 (1957). (3347)

Cutting or abrading (during twisting) is carried out in two stages, between which the yarn is immersed in a lubricating bath.

THREAD FEED STOPPING DEVICE FOR JUTE SPINNING MACHINE. H. Bade (to Jas. Mackie & Sons, Ltd). USP 2 807 131, Sept. 24, 1957. (3348)

RING SPINNING MACHINES OF THE DIRECT DRIVE TYPE. Brevets Aero-Mechaniques SA. BP 772 269, Apr. 10, 1957. Through BCIRA 37: 283 (1957). (3349)

The machines give good positioning of the rings irrespective of longitudinal expansion of the spindle rails during operation.

BOBBIN SUPPORTS FOR SPINNING. O. Stephan (to VEB Spinn- und Zwirnerei-Maschinenbau). BP 772 318, Apr. 10, 1957. Through BCIRA 37: 283 (1957). (3350)

The bobbin is held in place by centrifugal weights. The arrangement is particularly suitable for spinning synthetic threads.

BRAKES FOR SPINDLES. Nazionale Cogne SpA. BP 773 164, Apr. 24, 1957. Through BCIRA 37: 316 (1957). (3351)

The brakes have shoes that are applied to the wharves of the spindles.

DRAFTING MECHANISM. SKF Kugellagerfabriken GmbH. BP 773 310, Apr. 24, 1957. Through BCIRA 37: 315 (1957). (3352)

The sealing between the shaft and the boss in top (weighting) rollers is effected by a thin ring, which, by plastic deformation of the shaft, is held in position against a shoulder on the shaft.

SPINDLES. F. Marsland (to T. M. M. (Research) Ltd). BP 773 614, May 1, 1957. Through BCIRA 37: 316 (1957). (3353)

The bobbin carrier is made in two components, one of which is rotatably mounted on a dead blade and incorporates a driving wharve; the other is mounted on a stationary member that forms part of, or is fixed on, the dead blade and is driven from the first component through the medium of the bobbin.

MULTIPLE TWISTING SPINDLES. W. Morawek. BP 773 924, May 1, 1957. Through BCIRA 37: 316 (1957). (3354)

The bobbin is provided externally with axially spaced rings each with a knife edge for removing loose parts of the ballooning thread, and arranged to protect the delivery cap from accumulations of such parts.

BOBBIN WINDING MACHINE. W. L. Perry (to Abbott Machine Co.). USP 2 808 216, Oct. 1, 1957. (3355)

Pivoted thread guide arm for winding machine traverse mechanisms which reduces the grip needed by the friction slider thus permitting higher winding speeds.

DRAFTING MACHINERY DRIVE. G. H. Ambler and W. R. Collier (to Ambler Superdraft Ltd). USP 2 810 164, Oct. 22, 1957. (3356)

Drive, in high drafting apparatus, for shafts that are arranged for adjustment in a direction transverse to the axis of rotation. An object of the invention is to reduce substantially the application of load to the shaft bearings by the driving torque.

ADJUSTABLE SLUB CATCHER. A. J. Redmond. USP 2 808 634, Oct. 8, 1957. (3357)

TUBE SPINNING MACHINE. H. B. Williams. USP 2 808 697, Oct. 8, 1957. (3358)

Device for spinning fibers into yarns consisting of a rotating spinning tube, an air conveying system for supplying the fibers to the tube, and a take-up means for withdrawing and twisting the yarn.

WRONG TWIST PREVENTER FOR CHEESE WINDERS. J. F. Ridley (to Riegel Textile Corp.). USP 2 808 998, Oct. 8, 1957. (3359)

Device for attachment to the side of a bobbin pocket which is positioned in one direction to snare or trap ballooning S twist yarn and in the opposite direction for Z twist yarn.

TWISTING AND PLYING SPINDLE BALLOON CONTROL. USP Reissue 24 380, Oct. 22, 1957. Original No. 2 736 160, Feb. 28, 1956. (3360)

SIGNAL GENERATOR FOR SPINNING MACHINE SLUB MECHANISM. H. H. Dunn and E. H. Granberry (to West Point Mfg. Co.). USP 2 810 165, Oct. 22, 1957. (3361)

INDIVIDUAL YARN TWISTING DEVICE. J. D. Buchanan. USP 2 810 254, Oct. 22, 1957. (3362)

Wire twisting device into which the yarn is automatically threaded, rotated, and guided into a path such that the yarn is twisted on itself.

YARNS B 5

METHOD FOR THE PRODUCTION OF CURLED YARN. Algemene Kunstzijde Unie NV. BP 771 497, Apr. 3, 1957. Through BCIRA 37: 284 (1957). (3363)

Variations in the supply of the gas stream and in the yarn speed, etc., make it possible to produce yarns with local thickness variations (nubs).

CUTTING DEVICES FOR CONTINUOUS LENGTHS OF YARN FOR TUFTED CARPETS. W. Fenton. BP 771 624, Apr. 3, 1957. Through BCIRA 37: 285 (1957). (3364)

BLENDED YARNS. D. K. Colledge, W. M. Colledge, and J. D. Colledge (to Yarrow Wool Spinners Ltd). BP 771 893, Apr. 3, 1957. Through BCIRA 37: 285 (1957). (3365)

Yarns composed of angora fur (57%), lambswool (28%), combed silk (10%), and cashmere noils (5%) are described.

PRODUCTION OF TWIST (OR TORQUE) YARNS. Moulinage et Retorderie de Chavanoz. BP 772 346, Apr. 10, 1957. Through BCIRA 37: 284 (1957). (3366)

The yarn is heated in the setting zone by contact with a convex surface that is electrically heated.

APPARATUS FOR TREATING SYNTHETIC THREADS TO PRODUCE BULKED STRETCH YARNS. Zwirnerei und Nachfadenfabrik Goeggingen AG. BP 773 816, May 1, 1957. Through BCIRA 37: 316 (1957). (3367)

The apparatus has a container for wetting or swelling agent (and dye liquor if desired), a false twist device, and means for setting the deformations. The distance the threads travel from the container to the treatment zone can be varied.

YARN OR TOW PACKAGE FORMATION. A. M. Saum, C. E. Miller and R. E. McDonald (to E.I. du Pont de Nemours & Co.). USP 2 805 765, Sept. 10, 1957. (3368)

Apparatus for handling running lengths of yarn or tow at high speeds to form packages which may be readily rewound.

DECORATIVE METALLIC YARN. A. Nadel. USP 2 807 132, Sept. 24, 1957. (3369)

Metallic yarn prepared by twisting together several cores, each wrapped with metallic strands, and wrapping the twisted cores with a metallic covering to form spaced nubs.

BULKED YARN PREPARATION. E. J. Griset, Jr. (to American Enka Corp.). USP 2 807 862, Oct. 1, 1957. (3370)

Curled or bulked yarn is produced by passing continuous filament yarn through a suction device. The direction of yarn travel is changed as the yarn emerges (more slowly than it entered) while it is still being acted upon by the stream of air passing through the device. Numerous small curls are introduced throughout the length of the yarn.

MULTI-STEP STRETCHING OF NYLON TIRE CORD. H. H. Schenker (to E.I. du Pont de Nemours & Co.). USP 2 807 863, Oct. 1, 1957. (3371)

Nylon tire cord of lowered shrinkage and shrinkage tension is obtained by subjecting the cord to dry heat stretching in three consecutive stages.

PERMANENTLY LOOPED YARNS. W. I. Head (to Eastman Kodak Co.). USP 2 807 864, Oct. 1, 1957. (3372)

Bulk yarns with permanent loops are produced by treating continuous filament yarn with a composition (consisting of mineral oil and petroleum oil) characterized by scroopy and high static properties prior to the looping and bulking process.

SPLICE CONSTRUCTION FOR TWISTED PAPER YARN. B. M. Kimball (to Cellucord Corp.). USP 2 808 356, Oct. 1, 1957. (3373)

Knots of twisted paper yarn are covered with a spirally wound pressure sensitive plastic coated tape to make a splice enabling the yarn to pass freely through the heddles and other loom parts.

COMBINATION KNOT AND RETAINING MEANS FOR PLASTIC CLOTHES LINE. A. L. Cline (to Shuford Mills). USP 2 808 632, Oct. 8, 1957. (3374)

MAKING WORSTED TYPE YARN FROM SHORT FIBER WOOL TOPS. K. Avery (to Bachmann Uxbridge Worsted Corp.). USP 2 809 401, Oct. 15, 1957. (3375)

Converting short fiber wool top into spun worsted yarn by picking, carding, drawing, combing, drawing, roving, and spinning. Operations such as gilling and back-washing are omitted.

FABRIC PRODUCTION C

WARPING, SLASHING, YARN PREPARATION C 1

WINDING MACHINES FITTED WITH AUTOMATIC DEVICES FOR BOBBIN CHANGING, KNOT TYING, AND DETECTING FAULTY KNOTS. W. Reiners. BP 752 872, July 18, 1956. Through BCIRA 37: 286 (1957). (3376)

If the compressed air supply is to be available to several winding units simultaneously, an inordinate amount of power must be allotted to the blower system and the purpose of the invention is to obviate this by providing that only a limited number of the control devices are actuated at any given time. Any other winding units requiring attention are rendered inoperative until the control functions at the pre-determined number of winding units have been completed, at least in part.

WINDING MACHINES. W. Reiners. BP 752 882, July 18, 1956. Through BCIRA 37: 286 (1957). (3377)

The purpose of the invention is to reduce the power that has to be provided to automatic cheese-winding machines for the intermittent 'working operations' such as bobbin changing, knot tying, marking, etc., in addition to that required for the continuous winding operations. To set a limit to the power input it is proposed to fit the machine with an energy accumulator that can contribute its quota during peak demands and be charged during off-periods.

WEAVING PIRNS OR BOBBINS. H. L. Muschamp. BP 752 919, July 18, 1956. Through BCIRA 37: 287 (1957). (3378)

To facilitate tail-cutting on automatic pirn winders, pirns are formed with a groove over which the yarn must pass at the start of winding, the groove registering (with sufficient tolerance) with the cutting knife of the machine.

THREAD TENSION CONTROL MEANS FOR WINDING MACHINES. Barmer Maschinenfabrik AG. BP 752 957, July 18, 1956. Through BCIRA 37: 287 (1957). (3379)

In a grid-like tension control device, the tensioning bars are individually clamped at one end between fixed abutments and elastic fillets of rubber, cork, or the like so that they may be turned and displaced lengthwise.

COATING FOR YARN GUIDES, SPINNING NOZZLES AND OTHER MACHINE PARTS SUBJECT TO WEAR BY RUNNING TEXTILE MATERIALS. Metallgesellschaft AG. BP 753 297, July 18, 1956. Through BCIRA 37: 287 (1957). (3380)

ANTISTATIC PROCESSING OF POLYESTER FIBERS. H. Sagar (to Imperial Chemical Industries Ltd). BP 770 415, 416, Mar. 20, 1957. Through BCIRA 37: 287 (1957). (3381)

Treatment with an antistatic lubricant containing ethylene oxide/fatty alcohol condensation products is described.

DEVICE FOR STRIPPING WEFT FROM DISCARDED BOBBINS IN AUTOMATIC BOBBIN CHANGE LOOMS. G. E. Probets. BP 771 265, Mar. 27, 1957. Through BCIRA 37: 287 (1957). (3382)

The device is operatively connected to the bobbin-change mechanism.

MACHINES FOR WINDING YARN ON TO DOUBLE-FLANGED BOBBINS, THE FLANGES OF WHICH ARE TRUNCATED CONES. C. C. Bodel and E. Smith (to Linen Industry Research Association). BP 771 543, Apr. 3, 1957. Through BCIRA 37: 287 (1957). (3383)

WINDING MACHINES: INSTRUMENT THAT MEASURES THE RATE OF THREAD BREAKAGE AND COUNTS THE NUMBER OF THREAD TYING FAILURES. W. Reiners. BP 771 880 and 771 881, Apr. 3, 1957. Through BCIRA 37: 286 (1957). (3384)

HOLDERS FOR PAPER TUBES OR PIRNS OF DIFFERENT INTERNAL DIAMETERS. J. Crabtree. BP 772 084, Apr. 10, 1957. Through BCIRA 37: 287 (1957). (3385)

SIZED CREPE YARN. Algemene Kunstzijde Unie NV. BP 772 469, Apr. 10, 1957. Through BCIRA 37: 287 (1957). (3386)

Twisting (double-twister), sizing, drying, and winding on to cross-wound bobbins of large yarn weight are carried out as a single sequence of operations.

INCLINED CONVEYOR BELT WITH TRAYS FOR REMOVING AND CONVEYING BOBBINS TO AN AUTOMATIC WINDING MACHINE. H. Halstenbach, C. G. Rosenkranz and A. Plutte (to Halstenbach & Co.). BP 773 156, Apr. 24, 1957. Through BCIRA 37: 318 (1957). (3387)

YARN STORAGE DEVICE FOR WARPING MACHINES. K. Buder and H. Ehrl (to J. Sailer KG). USP 2 807 860, Oct. 1, 1957. (3388)

Yarn storage device equipped with falling rollers and an initial storage device consisting of a spring-loaded pivoted guard for preventing the overtensioning and disarrangement of the yarn.

SIZING AGENTS FOR HYDROPHOBIC FIBERS. F. B. Shippee and M. D. Hurwitz (to Rohm & Haas Co.). USP 2 807 865, Oct. 1, 1957. (3389)

Readily removable size for making spun yarns of hydrophobic fibers more amenable to processing consists of a water-soluble alkali metal or ammonium salts of acrylic copolymers.

SLUB CATCHERS FOR YARN WINDING MACHINES. S. R. Planer. BP 773 703, May 1, 1957. Through BCIRA 37: 318 (1957). (3390)

A suction nozzle is employed.

REED SUPPORT FOR WARP DRAWING-IN MACHINES. F. L. Wieneke (to Barber-Colman Co). USP 2 807 861, Oct. 1, 1957. (3391)

Floating reed mounting which provides proper lateral support for the reed dents during their engagement by the reed opener.

SLASHING APPARATUS. W. C. H. G. Vergers, P. J. Kreek and A. van Rijswijk (to American Enka Corp.). USP 2 807 953, Oct. 1, 1957. (3392)

Apparatus for preventing objectionable irregular currents in the treating liquid through which warp is moving.

SIZING AGENT FOR NYLON YARNS. A. F. Harris (to Monsanto Chemical Co.). USP 2 808 348, Oct. 1, 1957. (3393)

Sizing agent characterized by good adhesion and abrasion resistance is composed of a terpolymer of vinyl acetate, maleic anhydride, and an alkoxyethyl partial ester of maleic acid.

WEAVING C 2

PICKING MOTIONS FOR POWER LOOMS. Maschinenfabrik Rüti AG. BP 752 864, July 18, 1956. Through BCIRA 37: 288 (1957). (3394)

The picker stick is actuated from a cam through levers that lie in intersecting planes and are connected by a push rod, of wood or nylon, the ends of which are ball shaped and fit in sockets in the levers.

AUTOMATIC WEFT REPLENISHMENT. Coeurtys SA. BP 753 212, July 18, 1956. Through BCIRA 37: 288 (1957). (3395)

Electric control device for ensuring that a weft cop of the correct color has been selected and that the shuttle is correctly placed for the changing operation, before bobbin change is effected. The device includes at least one control circuit for bridging a circuit-breaker in the circuit of the weft-selecting device.

SHUTTLES. J. W. Bancroft (to Bancroft Shuttles & Bobbins Ltd). BP 753 328, July 25, 1956. Through BCIRA 37: 288 (1957). (3396)

The invention relates to a shuttle in which the 'skeleton' is made of the usual natural woods and the parts most subject to wear are formed from compressed, or compressed and resin-impregnated, wood, all bonded together before the final shaping.

SHUTTLE BOXES FOR LOOMS. M. Potter and A. G. Thompson (to Tootal Broadhurst Lee Co. Ltd). BP 772 052, Apr. 10, 1957. Through BCIRA 37: 288 (1957). (3397)

The boxes are lined with a heat resisting, strengthening thermoplastic resin.

PICKERS. W. R. Brooksbank. BP 753 334, July 25, 1956. Through BCIRA 37: 288 (1957). (3398)

A picker for an over-pick loom is constructed with an easily renewable striking piece and foot, bonded integrally to a portion of a metal 'skeleton', the remainder of which is bonded to the body of the picker to constitute a complete unit.

PUNCHING MACHINES FOR JACQUARD CARDS. J. G. G. Wilkinson (to Boucher & Co. Ltd). BP 771 828, Apr. 3, 1957. Through BCIRA 37: 288 (1957). (3399)

HAND-OPERABLE SHEDDING DEVICE IS DESCRIBED FOR HAND LOOMS. J. L. Sharp (to Garfitts Ltd). BP 772 361, Apr. 10, 1957. Through BCIRA 37: 287 (1957). (3400)

ELECTROMAGNETIC DRIVE FOR SHUTTLES OF A CIRCULAR LOOM. W. Josephy (to Osterreichische Textilmaschinenfabrik G. Josephy's Erben). BP 772 375, Apr. 10, 1957. Through BCIRA 37: 288 (1957). (3401)

PICKERS. J. Swift. BP 772 876, Apr. 17, 1957. Through BCIRA 37: 319 (1957). (3402)

Liquid nylon is injected into cavities to form bearing and working surfaces.

LOOM. Mira, nar. pod. BP 773 531, Apr. 24, 1957. Through BCIRA 37: 318 (1957). (3403)

Weft insertion into the shed is effected by a jet of liquid ('nozzle looms').

PICKERS. J. A. Sutcliffe and G. H. Bilham (to British Picker Co. Ltd). BP 773 774, May 1, 1957. Through BCIRA 37: 319 (1957). (3404)

In pickers of the kind used in Fischer and Whitaker attachments, means are provided for attaching the picking strap in a position that is in alignment with the part that comes into contact with the shuttle; friction and wear are reduced.

CIRCULAR LOOMS. Fairbairn Lawson Combe Barbour Ltd. BP 773 788, May 1, 1957. Through BCIRA 37: 319 (1957). (3405)

The invention relates to means for operating the heddle frames.

PICKER. S. Knutsson. BP 774 011, May 1, 1957. Through BCIRA 37: 319 (1957). (3406)

The picker body is of nylon and has a replaceable rubber or plastic insert.

LOOM. I. S. Porter. BP 774 021, May 1, 1957. Through BCIRA 37: 319 (1957). (3407)

Weft from a stationary weft package is inserted by a needle that is carried by a reciprocating slide.

REMOVAL OF THREAD BETWEEN SELVAGE AND SHUTTLE WHEN THE BOBBIN IS EXCHANGED. Adolph Saurer Ltd. BP 774 060, May 1, 1957. Through BCIRA 37: 319 (1957). (3408)

Mechanical pincers grip the piece of thread in the race board.

JACQUARD MECHANISM FOR WILTON LOOM. T. T. Janney and R. B. Patterson (to James Lees & Sons Co.). USP 2 807 283, Sept. 24, 1957. (3409)

The number of cards required for controlling the positions of the pile warps during the insertion of each weft yarn is substantially reduced by using only one jacquard card for each pile wire insertion in a two-shot fabric.

PICKING MOTION MECHANISM FOR FLY SHUTTLE LOOMS. W. F. Woodward. USP 2 807 284, Sept. 24, 1957. (3410)

WEFT YARN TENSION THREADER. J. W. McDaniel. USP 2 807 285, Sept. 24, 1957. (3411)

Friction type weft yarn threading device for automatic battery looms which eliminates the winding of the yarn about the hub or axle of the threader.

FLAT BACK AXMINSTER CARPET. J. H. Patrick. (to Beattie Mfg. Co.). USP 2 807 286, Sept. 24, 1957. (3412)

Weaving a flat back three-shot Axminster carpet from a chain warp, stuffer warp, binder warp, and tufts.

CIRCULAR LOOM HEDDLE FRAME. J. Catry and R. Humblot (to Fairbairn Lawson Combe Barbour Ltd). USP 2 808 071, Oct. 1, 1957. (3413)

Hook control device for heddle frame (held by hooks at one of its extreme positions) which effects the hooking and unhooking of the frame without causing fabric defects.

LOOM PILE WIRES. G. T. Stovall (to N. Y. Trust Co.). USP 2 808 072, Oct. 1, 1957. (3414)

Longitudinal loop pile wires adapted to extend through the dents of a loom reed for producing loops of varying heights.

HEDDLE FRAME. F. M. Suchke (to Pioneer Heddle & Reed Co.). USP 2 808 073, Oct. 1, 1957. (3415)

Lightweight heddle frame with an end section permitting the rapid insertion and removal of heddle bars, as well as locking means permanently attached to the frame.

PICKING MECHANISM. C. R. Kronoff and G. N. Peterson (to Crompton & Knowles Loom Works). USP 2 808 074, Oct. 1, 1957. (3416)

Method of tripping a plunger to initiate a hydraulic picking mechanism.

CAST IRON SHUTTLE THREADING BLOCK FOR AUTOMATIC LOOMS. R. G. Mallard (to Draper Corp.). USP 2 808 075, Oct. 1, 1957. (3417)

AUTOMATIC BOBBIN CHANGING LOOMS. J. F. Moseley and F. Davies (to Brit. Cotton Industry Res. Assoc.). USP 2 808 076, Oct. 1, 1957. (3418)

Method of controlling and removing new tail ends by manually engaging the yarn ends during loading and tensioning under suction so that after several picks the new end may be cut and the free length brought into the suction device.

FILLING FEELER. A. W. Ratkiewicz and J. M. Budzyna (to Draper Corp.). USP 2 808 077, Oct. 1, 1957. (3419)

Side slipping filling feeler which functions as part of an electric circuit and makes contact only when the feeler tip is in contact with the bobbin surface.

SHUTTLE CHECKING DEVICE. E. Pfarrwaller (to Sulzer Freres SA). USP 2 808 853, Oct. 8, 1957. (3420)

Checking device for the yarn clamp of a gripper shuttle which avoids contact with the opened clamp of the shuttle and the inside of the shuttle body opening.

LETOFF FOR NARROW WARE LOOMS. E. R. Holmes (to Crompton & Knowles Loom Works). USP 2 809 670, Oct. 15, 1957. (3421)

Automatic letoff which permits the weaving of several different webs with groups of warp threads drawn from a relatively long warp beam.

MEMORY UNIT FOR AUTOMATIC SHUTTLE CHANGING. E. A. Butin (France). USP 2 809 671, Oct. 15, 1957. (3422)

A recording or memory device for a multiple box loom is located between the weft feeler and shuttle box selector unit. The unit, in response to the weft feeler, causes an immediate shuttle change if the shuttle box corresponding to the exhausted shuttle is in operative position. If a shuttle box change has occurred meanwhile, the change is produced only when the shuttle box returns to the operative position.

LOOM STOP MOTION. A. T. Godschalx. USP 2 810 402, Oct. 22, 1957. (3423)

Control circuit for stopping the loom, with retention of the lay in the forward position, upon failure of the weft clamping elements.

SHUTTLELESS LOOM. K. E. Sanderson and A. J. Tosches (to Draper Corp.). USP 2 810 403, Oct. 22, 1957. (3424)

Magnetic device for maintaining a flexible filling spring in contact with an oscillating wheel upon which it is alternately wound and unwound.

AUTOMATIC THREADING SHUTTLE. J. W. Chalmers and E. P. Thomas. USP 2 810 404, Oct. 22, 1957. (3425)

Device for bringing the yarn under proper tension as soon as the shuttle starts moving on the first pick after transfer. This eliminates weft breakage on the first and second picks after transfer.

HYDRAULIC WEFT TENSIONING DEVICE. B. B. Purdy. USP 2 809 672, Oct. 15, 1957. (3426)

KNITTING C 3

STRETCHABLE KNIT FABRIC. R. F. Stuewer (to Grove Silk Co.). USP 2 807 073, Sept. 24, 1957. (3427)

Elastic fabrics are prepared by knitting successive courses of two non-lively synthetic yarns with opposite potential twists with a third yarn having no twist potential, and heating the fabric formed to release the twist of the first two yarns.

SEAMLESS SURGICAL STOCKINGS AND BRACES. P. Virchaux (Switzerland). USP 2 807 946, Oct. 1. 1957. (3428)

Tubular surgical stockings and braces with the proper anatomical form are produced on a circular knitting machine by continually changing the feeding tension of the rubber bearing thread.

PATTERN CONTROL FOR CIRCULAR KNITTING MACHINE. J. L. Morris. USP 2 808 712, Oct. 8, 1957. (3429)

Split pattern drum for multiple feed circular knitting machines which makes it possible for more than one large jacquard pattern to be set up at one time, to knit on more feeds, and to use different patterns on the same garment as desired.

DOUBLE SPRING BEARD KNITTING NEEDLE. J. L. Morris. USP 2 808 713, Oct. 8, 1957. (3430)

Needle which will form elliptical or crochet crossed loop fabrics where the loops have more than one twist.

STITCH CAM FOR CIRCULAR HOSIERY MACHINES. P. A. Mahler (to Fidelity Machine Co.). USP 2 809 507, Oct. 15, 1957. (3431)

Stitch cam capable of producing stitches of uniform size over long periods of time.

TRANSFER JACK ASSEMBLY FOR CIRCULAR HOSIERY MACHINE. J. J. McDonough (to Scott & Williams). USP 2 809 508, Oct. 15, 1957. (3432)

Device for securing together the two cooperating elements of each jack assembly each of which has a flat elongated body portion.

SHAPED SEAMLESS HOSIERY. B. T. R. Reymes-Cole, J. M. R. Reymes-Cole and D. N. R. Reymes-Cole (to Kendall Co.). USP 2 809 509, Oct. 15, 1957. (3433)

Fashioning the leg of a seamless stocking by varying the number of wales during its production on a circular knitting machine to simulate full-fashioned hosiery.

CIRCULAR MACHINERY FOR SMOOTH AND NET MESH STOCKINGS. G. Billi (Italy). USP 2 810 277, Oct. 22, 1957. (3434)

Modification of machine for making smooth mesh so that it may be used to make net mesh.

REINFORCED KNITTED FABRIC. H. K. West (to Dexdale Hosiery Mills). USP 2 809 510, Oct. 15, 1957. (3435)

Reinforced infield area for selvaged panty blank produced by overlapping the traverse of two carriers so that their yarns are fed respectively to opposite end groups of needles.

WARP KNITTING MACHINE LATCH NEEDLE SINKER ASSEMBLY. H. C. Noe (to Kidde Mfg. Co.). USP 2 810 278, Oct. 22, 1957. (3436)

Sinker assemblies with means which act as a latch wire in maintaining the latches down or open.

KNITTING MACHINE. M. B. Striar. USP 2 810 279, Oct. 22, 1957. (3437)

Bobbin holder and yarn feed mechanism which are always within reach of the operator.

CIRCULAR KNITTING MACHINE CLIPPING DIAL. R. K. Rossman. USP 2 810 280, Oct. 22, 1957. (3438)

Clipping dial for automatically removing floaters during the knitting of patterned fabrics from several yarns.

FABRICS C 4

AXMINSTER PILE FABRICS FROM THERMOPLASTIC YARNS. E. P. Mersereau, Jr. (to Mohasco Industries). USP 2 807 072, Sept. 24, 1957. (3439)

Thermoplastic yarns, for use as the pile yarn in Axminster fabrics, are prepared by hard twisting a thermoplastic multi-ply spun yarn, heating to permanently set the twist, reverse twisting, and coating with a soluble size. After weaving the coating is removed, causing the pile yarn to separate and coil into interleaved helices.

APPARATUS FOR WINDING A COVERING OF INSULATING TAPE AROUND A TRAVELING WIRE OR CABLE. D. L. Williams (to Rome Cable Corp.). USP 2 807 129, Sept. 24, 1957. (3440)

SATEEN LABELS. P. Isbouts (to Brabantse Kunstweverij NV). USP 2 808 078, Oct. 1, 1957. (3441)

Sateen labels with tightly woven marginal portions which permit them to be woven as a cloth and to be separated without fraying their edges.

NONWOVEN FABRICS. M. A. Chavannes and J. W. Howden (to Permex Corp.). USP 2 808 098, Oct. 1, 1957. (3442)

Method and apparatus for bonding fibers together with a powdered thermo-responsive resin to form sheets.

FANCY TUFTED FABRIC MACHINE. W. Y. Robb and H. L. Blanchard (to Crompton & Knowles Loom Works). USP 2 809 600, Oct. 15, 1957. (3443)

Tufting machine operating with a series of pile yarn carriers, each with its own supply of differently colored yarn, moving one at a time to a tuft forming position.

LAMINATED RESIN IMPREGNATED FIBROUS WEBS. C. J. Seiler (to Union Carbide Corp.). USP 2 808 350, Oct. 1, 1957. (3444)

Laminated fabrics are prepared from fibrous webs (paper or fabric) impregnated in one stage with a novolac type condensation product of a phenol and an aldehyde or ketone and in another stage by an agent containing a methylene group reactive with the novolac resin to form a thermosetting binder.

TUFTED FABRIC WITH VARIANT-HEIGHT TUFTS. E. Morgan and T. C. Sippel (to Scotland Mills). USP 2 808 855, Oct. 8, 1957. (3445)

Variant-height tufted chenille bedspread fabric is prepared by floating groups of thick yarn on a base fabric and tying the yarns in some rows at twice the intervals of other rows so that, on cutting, tufts of two different heights are formed.

CHENILLE FABRIC MANUFACTURE. E. Morgan and T. C. Sippel (to Scotland Mills). USP 2 809 669, Oct. 15, 1957. (3446)

Chenille bedspread fabric in which the ground fabric is woven from fine yarns and has rows of spaced tufts of heavy yarn, as well as braided effect areas in the form of closely spaced uncut embossed dots between certain of the tufts.

SIMULATED PILE FABRIC STRUCTURE. J. Chatanay (France). USP 2 809 909, Oct. 15, 1957. (3447)

Flexible elastic or plastic backing for tufted carpet is composed of an upper cellular structure, each cell of which receives a tuft (embedded in a molded plastic base), an intermediate section into which the tufts are clamped, and a lower cellular structure intended to lie on the floor. Individual tufts may be replaced.

MAKING PREFABRICATED LAMINATED UPHOLSTERY MATERIAL. D. G. Deddo. USP 2 809 910, Oct. 15, 1957. (3448)

Decorative, sound-deadening upholstery laminate is prepared by placing a padding (spot coated on one side with a heat sensitive adhesive) adhesive side down on a stiff board, placing a sheet of thermoplastic resin and another of decorative upholstery fabric in succession on the padding, and subjecting to heat and pressure.

STAIN OR SPOT REMOVING APPARATUS. W. D. Greer (to Hanes Hosiery Mills). USP 2 810 216, Oct. 22, 1957. (3449)

Apparatus for removing grease or oil spots from finished nylon hosiery or other garments without the necessity for stripping, redyeing, or reprocessing.

GLASS FABRIC. M. Huau (France). USP 2 810 405, Oct. 22, 1957. (3450)

Glass fabric consisting of two layers of glass filaments superimposed on each other at a 90° angle with binding filaments consisting of a warp and a weft woven together but not woven with the main filament.

WOVEN ELASTIC BANDAGE. H. F. Sherman. USP 2 810 184, Oct. 22, 1957. (3451)

Highly stretched crimped nylon yarn is used as warp or filling for a one-way stretch bandage or as warp and filling for a two-way stretch bandage. The desired elastic properties are then imparted to the relatively inelastic woven fabric by wetting at 170° F or higher, shrinking in cold water, and drying and setting without tension at 212° F or higher.

NEEDLE TUFTING MACHINE. E. H. Shattuck (to Mohasco Industries). USP 2 810 471, Oct. 22, 1957. (3452)

High and low loops, according to a predetermined pattern, are produced by means of two tension devices which selectively grip the yarn ends in advance of the needles.

FINISHING AND CHEMICAL PROCESSING D

CHEMICAL PROCESSES D 1

APPLYING LIQUIDS TO FIBERS. W. M. Davis, R. S. Hood and E. K. Jung (to Monsanto Chemical Co.). USP 2 805 640, Sept. 10, 1957. (3453)

Apparatus for continuously spraying liquids, particularly sticky or tacky substances, onto fibers without causing the fibers to accumulate on the walls of the conduit through which they are conveyed by means of a gas stream. An example is given of cotton sprayed with colloidal silica.

SETTING THE CRIMP IN POLYACRYLONITRILE FIBERS. W. A. Hare (to E. I. du Pont de Nemours & Co.). USP 2 808 311, Oct. 1, 1957. (3454)

Method of setting the mechanical crimp in polyacrylonitrile fibers by impregnation with a heated dilute aqueous solution of a hydroxyl or amine substituted benzene or naphthalene compound.

CREASEPROOFING CELLULOSIC FABRICS. W. B. Canter (to Dan River Mills). USP 2 808 341, Oct. 1, 1957. (3455)

Wrinkle resistant cellulose fabrics with a permanent soft hand and stability to laundering are obtained by impregnating starch-sized fabrics with a thermosetting resin, catalyst, and amylase, storing to partially hydrolyze the starch, and heating to halt enzyme action, cure the resin, and fix the partially hydrolyzed starch.

BRIGHTENING AGENTS FOR POLYACRYLONITRILE FIBERS. E. Keller and R. Zweidler (to J. R. Geigy AG). USP 2 809 123, Oct. 8, 1957. (3456)

PROTECTING WOOL FROM YELLOWING. M. K. Walden and H. P. Lundgren. USP 2 809 131, Oct. 8, 1957. (3457)

The tendency of wool to yellow on ageing is greatly diminished or eliminated by soaking it in an aqueous solution of dibutyl butanephosphonate.

FABRIC ORNAMENTATION. C. S. Parker and A. Melville (to Bleachers' Assoc. Ltd and Bradford Dyers' Assoc. Ltd). USP 2 808 635, Oct. 8, 1957. (3458)

Raised decorative effects, such as crimps, puckers, or blisters, are obtained by so compressively shrinking a fabric in its width that it will extend when wetted with the shrinkage fixed in selected regions previously treated with a resin.

DYEING AND BLEACHING APPARATUS. P-G. Mellgren (to Pluria AB). USP 2 808 715, Oct. 8, 1957. (3459)

Uniform bleaching and dyeing is attained by means of an apparatus equipped with a pump which operates either as a vacuum pump or compressor to set up pulsations in the treatment liquid. Compressed air may be blown through the treatment chamber to produce superatmospheric pressure.

REGENERATED CELLULOSE BALLOON CLOTH. J. K. Phillips and A. M. Sookne (to Goodyear Tire & Rubber Co.). USP 2 809 089, Oct. 8, 1957. (3460)

Superior balloon cloth is prepared by rubber coating a regenerated cellulose fabric which has been alkali-treated to improve flex life by increasing yarn crimp. The yarns or fabrics are further treated by steam blasting to flatten the yarns and make the fabric more dense.

ANTISTATIC AND REWETTING COMPOSITION. E. I. Welles and S. M. Edelstein (to Dexter Chemical Corp.). USP 2 809 159, Oct. 8, 1957. (3461)

Antistatic and rewetting composition for synthetic fibers consists of a hydroxyamine containing a saturated alkyl group attached to the amine nitrogen and a water soluble polyhydric alcohol.

FULLING MACHINE. E. W. Smith. USP 2 810 183, Oct. 22, 1957. (3462)

Means for providing accurate oscillation of pressure rolls about and in contact with oscillating rotating rolls to improve wetting.

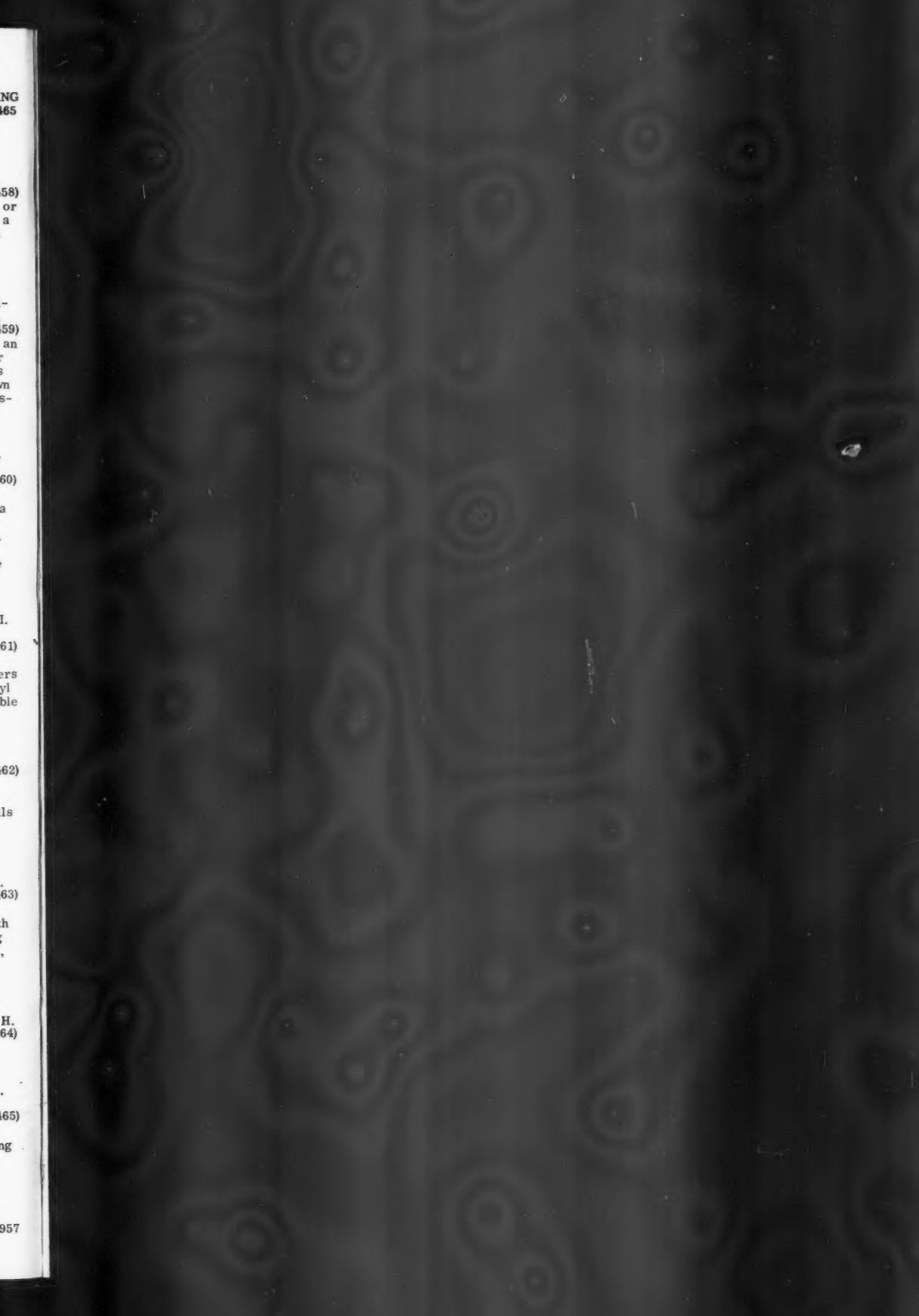
PLISSE CELLULOSE FABRIC. W. A. Wardell (to Rohm & Haas Co.). USP 2 810 624, Oct. 22, 1957. (3463)

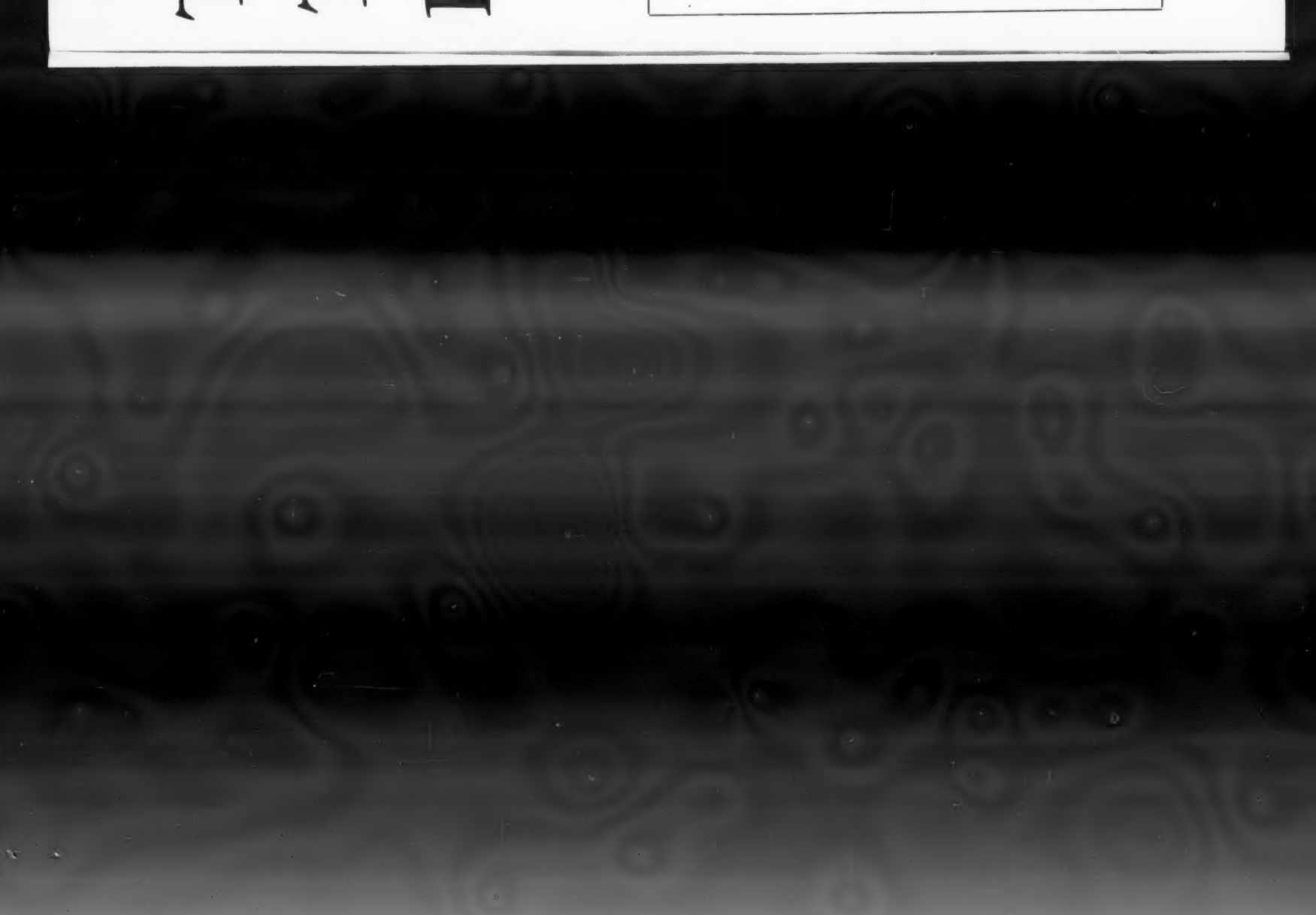
Permanent plissé fabrics are prepared by treating cellulose fabrics containing yarns of normal twist with 1,3-bis(hydroxymethyl)-2-imidazolidone, heat drying under tension, printing locally with a shrinking paste, washing, and drying.

FIBER SCOURING AND WASHING APPARATUS. E. H. Brooks, Jr. USP 2 810 625, Oct. 22, 1957. (3464)

CHLORITE BLEACHING OF CELLULOSE ACETATE. B. T. Lamborn (to Hercules Powder Co.). USP 2 810 717, Oct. 22, 1957. (3465)

Bleaching of cellulose acetate with a chlorite bleaching agent in the presence of a nitrogen compound, e.g., ammonia, to inhibit corrosion.





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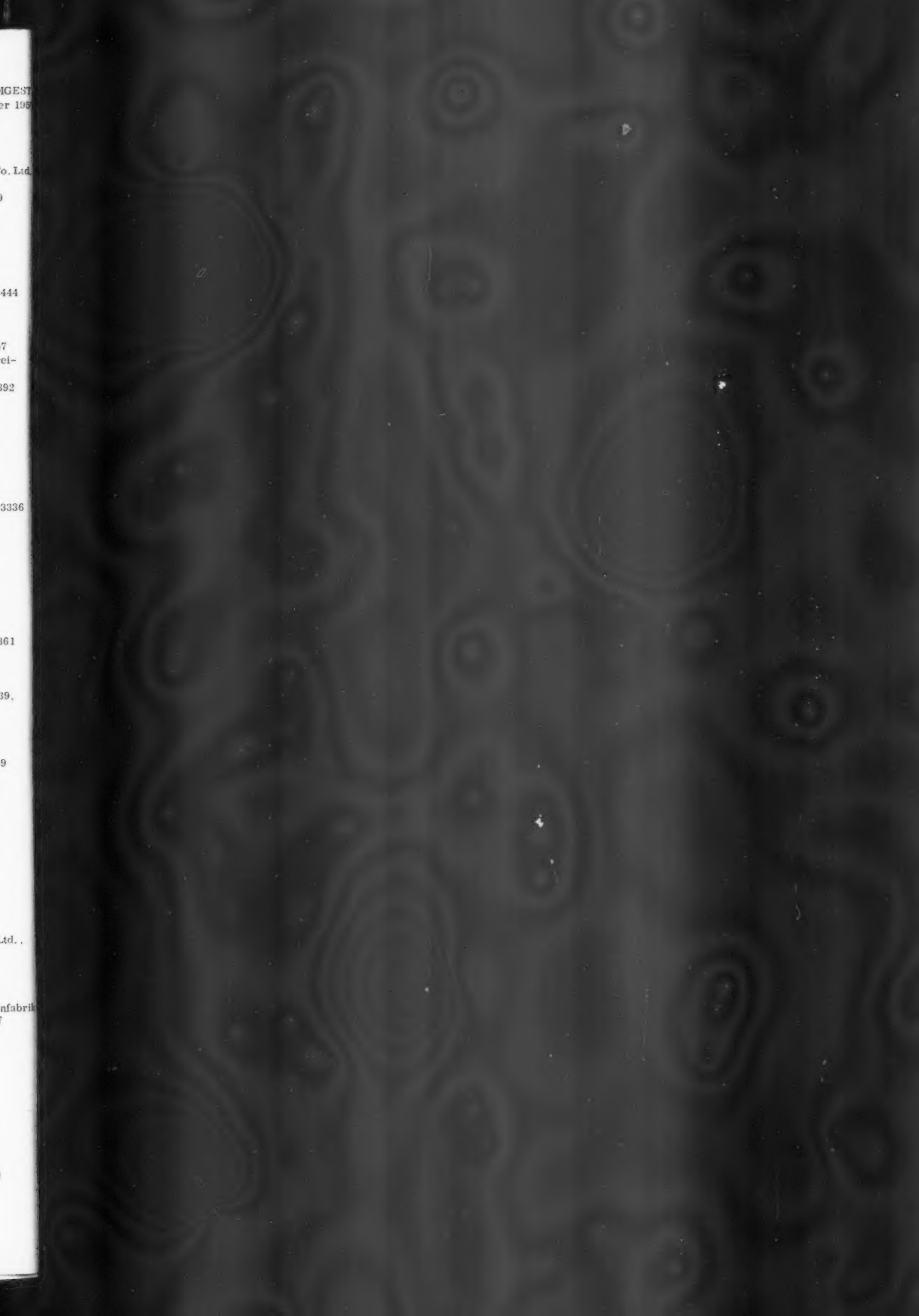
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